

1/462 U113
2
TM
1941

TM 10-380

U.S. WAR DEPARTMENT
U.S. Dept. of Army
TECHNICAL MANUAL
*
WATER TRANSPORTATION
February 14, 1941



162 10 11
162 10 11
162 10 11
162 10 11

4113
12
TM 10:380
1941

TM 10-380
1

TECHNICAL MANUAL }
No. 10-380 }



WAR DEPARTMENT,
WASHINGTON, February 14, 1941.

WATER TRANSPORTATION

Prepared under direction of
The Quartermaster General

	Paragraphs
SECTION 1. General.....	1-2
II. History of U. S. Army Transport Service.....	3-6
III. Shore establishment of Army Transport Service.....	7-13
IV. Organization, administration, operation, and supply of Army transports.....	14-24
V. Harbor Boat Service.....	25-33
VI. Charter of commercial vessels.....	34-45
VII. Redelivery of chartered vessels.....	46-51
VIII. Oversea shipping, normal operations.....	52-65
IX. Expeditionary forces, movement of troops, equip- ment, and supplies.....	66-73
X. Transportation of animals.....	74-79
XI. Miscellaneous.....	80-85
APPENDIX I. List of references.....	77
II. Glossary of terms.....	78
III. Bibliography.....	82
INDEX.....	83

SECTION I

GENERAL

	Paragraph
General	1
Statutory provisions.....	2

1. **General.**—*a.* The Quartermaster General provides, maintains, and has jurisdiction over all vessels required in the War Department service, except those required for river, harbor, and fortification work, under the Chief of Engineers.

b. These vessels are divided into two general groups as indicated below, and assigned to duty and stations as military necessity requires according to type of craft and demands of the service involved:

(1) *Group 1.*—Army Transport Service which operates all larger seagoing Army transports and other special purpose ocean vessels for transference of military personnel, supplies, and impedimenta from designated bases to oversea or distant coastal points.

(2) *Group 2.*—Harbor Boat Service which constitutes all the smaller vessels not classed as transports with subclassifications according to the general type of vessels or the services which they perform as follows:

(a) *Coast artillery vessels.*—These vessels are mine planters, distribution box boats, and motor mine yawls. They are designed, constructed, and maintained under direction of The Quartermaster General, but are under immediate control of the Chief of Coast Artillery, who is responsible for assigning and maintaining proper crews from artillery personnel.

(b) *Freight and passenger vessels.*—These vessels are under immediate control of The Quartermaster General and are used for transportation of military personnel and supplies from designated points to military garrisons where cost of water shipments by this Government agency is more economical than by commercial carriers.

(c) *Air Corps vessels.*—The Air Corps requires vessels of high speed type for rescue service at air fields where practice flying over water is conducted. Like coast artillery vessels they are designed, constructed, and maintained under direction of The Quartermaster General but are operated under control of the Air Corps. If manned by civilian crews, the crews are provided by The Quartermaster General.

c. Any of the vessels in the above groups as military exigencies require may be assigned to any arm or service of the Army. In such cases the quartermaster corps is charged with the duty of maintaining the vessels in proper repair, adequately manned, and provisioned for such intended special service.

d. The above described water transportation of the War Department is organized to render peacetime service, but it also represents an element in preparedness because it serves as a nucleus in developing and training personnel capable of handling military transport work in time of national emergency.

e. Vessels required for river, harbor, and fortification work are maintained and operated under the exclusive jurisdiction of the Chief of Engineers.

2. Statutory provisions.—a. *Army transportation; supervision.*—(1) The Secretary of War shall * * * prescribe general regulations for the transportation of articles of supply from

the places of purchase to the several armies, garrisons, posts, and recruiting places * * *. *R. S. 219; 10 U. S. C. 1192.*

(2) * * * The Quartermaster General, under the authority of the Secretary of War, shall be charged * * * with the transportation of the Army by land and water, including the transportation of troops and supplies by mechanical or animal means; with the furnishing of means of transportation of all classes and kinds required by the Army * * *. *Sec. 9, act of June 3, 1916 (39 Stat. 170) as amended by sec. 9, act June 4, 1920 (41 Stat. 766); 10 U. S. C. 72.*

(3) The transportation of troops, munitions of war, equipments, military property, and stores, throughout the United States shall be under the immediate control and supervision of the Secretary of War and such agents as he may appoint. *R. S. 220; 10 U. S. C. 1363.*

b. Use by Government Surveys.— * * * *Provided also,* That hereafter the Quartermaster General and his officers, under his instructions, wherever stationed, shall receive, transport, and be responsible for all property turned over to them, or any one of them, by the officers or agents of any Government survey, for the National Museum, or for the civil or naval departments of the Government, in Washington or elsewhere, under the regulations governing the transportation of Army supplies, the amount paid for such transportation to be refunded or paid by the Bureau to which such property or stores pertain. * * *. *Act July 5, 1884 (23 Stat. 111); 10 U. S. C. 73.*

c. Use by American National Red Cross.—That when the Red Cross cooperation and assistance with the land and naval forces in time of war or threatened hostilities shall have been accepted by the President, the personnel entering upon the duty specified in section one of this Act shall, while proceeding to their place of duty, while serving thereat, and while returning therefrom, be transported and subsisted at the cost and charge of the United States as civilian employees employed with said forces, and the Red Cross supplies that may be tendered as a gift and accepted for use in the sanitary service shall be transported at the cost and charge of the United States. *Sec. 2, act April 24, 1912 (37 Stat. 91); 36 U. S. C. 11.*

d. Army transports; passenger and freight carried.—(1) * * * *Provided,* That no part of this appropriation shall be applied to the payment of the expenses of using transports in any other Government work than the transportation of the Army, its supplies and employees; and when, in the opinion of the Secretary of War, accommodations are available, transportation may be provided for the officers, enlisted men, employees, and supplies of the Navy, the Marine Corps,

and for members and employees of the Philippine and Hawaiian governments, officers of the War Department, Members of Congress, other officers of the Government while traveling on official business, and without expense to the United States, for the families of those persons herein authorized to be transported, and when accommodations are available, transportation may be provided for general passengers to the island of Guam, rates and regulations therefor to be prescribed by the Secretary of War: * * * *Act March 2, 1907 (34 Stat. 1170); 10 U. S. C. 1371.*

(2) * * * *Provided*, That hereafter when, in the opinion of the Secretary of War, accommodations are available, transportation on vessels of the Army Transport Service may be furnished the officers, employees, and enlisted men of the Revenue-Cutter Service, and their families, without expense to the United States, and also secretaries and supplies of the Army and Navy department of the Young Men's Christian Association: * * * *Act March 3, 1911 (36 Stat. 1051); 10 U. S. C. 1370.*

(3) * * * *Provided further*, That hereafter when there is cargo space available without displacing military supplies, transportation may be provided for merchandise of American production consigned to residents and mercantile firms of the island of Guam, rates and regulations therefor to be prescribed by the Secretary of War: * * * *Act March 3, 1911 (36 Stat. 1051); 10 U. S. C. 1368.*

(4) * * * *Provided further*, That in the joint discretion of the Secretary of War and chairman of the Shipping Board, and when space is available, civilian passengers and shipments of commercial cargo may be transported on Army transports in the trans-Atlantic service, at such times as space is not available on commercial lines, at rates not less than those charged by commercial steamship companies, between the same ports, for the same class of accommodations, the receipts from which shall be covered into the Treasury of the United States to the credit of miscellaneous receipts: * * * *Act June 5, 1920 (41 Stat. 960); 10 U. S. C. 1367.*

(5) * * * *And provided further*, That hereafter, when, in the opinion of the Secretary of War, accommodations are available, transportation on Army transports may be provided for the members and employees of the Porto Rican Government and their families on official business without expense to the United States: * * * *Sec. 1, act June 30, 1921 (42 Stat. 81); 10 U. S. C. 1369.*

e. Army transports, inspection.—The President may, temporarily, three competent naval officers for the service of the War Department in the inspection of transport vessels, and for such other

WATER TRANSPORTATION

services as may be designated by the Secretary of War. *R. S. 1437; 10 U. S. C. 1366.*

f. Army transports not to be sold without consent of Congress.—
* * * and hereafter no steamship in the transport service of the United States shall be sold or disposed of without the consent of Congress having been first had or obtained; * * * *Act March 2, 1905 (33 Stat. 837); 10 U. S. C. 1372.*

*g. Army Transport Service not to be discontinued without action of Congress.—** * * *Provided, That no action looking to the discontinuance of the transport service shall be taken without further action of Congress. Act March 2, 1903 (32 Stat. 939); 10 U. S. C. 1373.*

*h. Control in time of war.—** * * The President, in time of war, is empowered, through the Secretary of War, to take possession and assume control of any system or systems of transportation, or any part thereof, and to utilize the same, to the exclusion as far as may be necessary of all other traffic thereon, for the transfer or transportation of troops, war material and equipment, or for such other purposes connected with the emergency as may be needful or desirable. *Sec. 1, act August 29, 1916 (39 Stat. 645); 10 U. S. C. 1361.*

SECTION II

HISTORY OF U. S. ARMY TRANSPORT SERVICE

	Paragraph
Organization	3
American merchant marine ships unsuited.....	4
Performance.....	5
Fleet of Army transports.....	6

3. Organization.—Organization of the Army Transport Service dates from the Spanish-American War. Prior to 1898 the United States did not have in its possession or under its jurisdiction a single ship for either the Atlantic or Pacific passenger and freight service. It did possess however a number of harbor and ferry boats for operations around the ports of New York, San Francisco, and the Gulf.

4. American merchant marine ships unsuited.—After very careful investigation it was found that the ships of the American Merchant Marine were not suited for the carrying of troops and animals, nor in general for the transportation of quartermaster supplies until such vessels could be redesigned and overhauled for that purpose. It became necessary to originate a fleet of vessels for the purpose of taking troops to Cuba and their return, and likewise to the Philippines. To meet this emergency the following vessels were taken over:

Line	Original	Renamed
Atlantic Transport (a line flying the British flag and registered under the laws of Great Britain).	Minnewaska.....	Thomas
	Mobile.....	Sherman
	Massachusetts.....	Sheridan
	Manitoba.....	Logan
	Michigan.....	Kilpatrick
	Mississippi.....	Buford
Others.....	Samoa.....	Dix
	City of Chester.....	Sedgewick
	City of Berlin.....	Meade
	Unknown.....	Hancock
American.....	Unknown.....	Rosecrans
	Scandia.....	Warren
	Clearwater.....	Ingalls
	Rumanian.....	Crook
	Cassius.....	Sumner
	Port Victor.....	McClellan
	Unknown.....	Grant

These, with two ships captured from Spain, the *Panama* and the *Rita* (renamed the *Hooker* and the *Burnside*), together with a ship purchased in China, the *Kong See* (renamed *Liscum*), and the *Gypsum King* (now the tug *Slocum*), comprised the fleet for a great many years. The *Slocum* is the only one still remaining in transport service. During the time the Army Transport Service has been in operation with its numerous ships, not one single loss of life due to the operation of the ships as Army transports has ever been reported, a record not excelled by any steamship company in the world after more than a quarter of a century of operation.

5. **Performance.**—*a.* The prompt transportation of troops to Vera Cruz, Mexico, prior to the World War was made practicable by Government ownership of transports.

b. In 1928, under instructions from the Secretary of War, the *St. Mihiel* discharged its entire cargo (552 cubic tons) of food supplies (originally consigned to Panama) at San Juan, Puerto Rico, for distribution to the sufferers from the storm of September 13-18, 1928. The transport *Kenowis* en route from Panama to New York was also diverted to San Juan for possible emergency use.

c. The Nicaraguan earthquake occurred during 1931. At that time such supplies on board the *Kenowis* as could be utilized for the relief of sufferers were transferred for that purpose. The transports *Grant* and *Somme* carried 94 refugees from Nicaragua to New York, San Diego, and San Francisco.

d. The *Meigs* was diverted to Portland, Oregon, on July 8, 1934, to load flour for the Philippines which could not be moved to San Francisco at that time for loading because of the longshoremen's strike.

e. In May, 1935, the *St. Mihiel* made two trips to Alaska for the purpose of transporting farmers from the drought areas of the North Western States to Matanuska Valley, Alaska. On one trip she sailed from San Francisco and on the second trip from Seattle, Washington.

6. Fleet of Army transports.—The following table shows existing fleet of Army transports as of March, 1940:

Registered data and inventory features	1	2	3	4	5	6	7	8	9	10
	Republic	U. S. Grant	Chateau Thierry	St. Mihiel	Hunter Liggett	Leonard Wood	American Legion	Meigs	Ludington	Liberty
Tonnage:										
Gross-----	18, 172	9, 410	7, 555	7, 555	13, 712	13, 712	13, 736	7, 451	8, 292	6, 211
Net-----	11, 222	5, 764	3, 919	3, 919	8, 054	8, 054	8, 137	4, 507	6, 168	3, 835
Dimensions:										
Length, feet-----	600	508	448	448	535	535	535	430	439' 6"	410
Beam, feet-----	68	55' 3"	58	58	72	72	72	54	60	55
Depth, feet-----	48' 3"	31' 2"	40	40	50	50	50	38' 3"	36' 8"	31' 4"
Draft:										
Light-----	21' 5"	19' 7"	22'	22'	15' 6"	15' 6"	16' 7"	9' 11"	9'	10' 4"
Loaded-----	33' 5"	27' 6"	28'	28'	30' 6"	30' 6"	30' 6"	28' 10"	28' 5"	28'
Speed (knots)-----	14	14	14	14	18	18	18	10½	11	10
Hatches-----	8	6	7	7	8	8	8	6	5	5
Complement:										
Military:										
Officers-----	3	3	1	2	2	2	2			
Enlisted men-----	13	8	8	10	11	11	11	5	5	5
Civilian:										
Officers (licensed)-----	19	10	10	10	20	20	20	9	10	11
Men-----	285	209	96	130	181	181	181	48	45	44
Passenger capacity (comfortable):										
1st class-----	330	260	105	105	155	155	110			
2d class-----	95	75	40	40	50	55	50			
3d class (troop)-----	1, 200	582	725	725	975	975	700	*40		

*Attendants for animals.

WATER TRANSPORTATION

SECTION III

SHORE ESTABLISHMENT OF ARMY TRANSPORT SERVICE

	Paragraph
Classification and designation.....	7
Officer in charge.....	8
Primary port.....	9
Personnel	10
Duties and responsibilities.....	11
Outports	12
Organization	13

7. Classification and designation.—*a.* War Department ports established for oversea transportation of troops and supplies, whether in the United States and its possessions or in foreign countries, are classed as primary ports, outports, ports of embarkation or debarkation, and for convenience of reference, ports are further designated as home, domestic, and foreign in accordance with the following definitions:

(1) A primary port is any War Department port which is the headquarters of a line of Army transports. When a primary port is located at a port of embarkation, it forms a part of that port of embarkation under jurisdiction of the commander of that port (see fig. 1). At points within the jurisdiction of a department or an expeditionary force commander, primary ports are under jurisdiction of such commanders except as indicated in (3) below.

(2) An outport is any War Department port which is not the headquarters of a line of transports, but a port of call for transports operating from a primary port. The officer in charge ordinarily is an officer of the quartermaster corps and is designated as "assistant superintendent, Army Transport Service."

(3) A port of embarkation or debarkation is any port established by the War Department for embarkation or debarkation of troops and supplies, and designated as such in general orders. Ports of embarkation or debarkation usually are placed under the command of a general officer assigned by the War Department. Where a port of embarkation or debarkation is established at an existing active primary port or outport, such War Department personnel and facilities of the port as may be necessary to carry on embarkation or debarkation activities are placed under jurisdiction of the commander of the port.

(4) Home port is any War Department port at which the headquarters of a line of transports is located.

(5) Domestic port is any War Department port within the continental limits of the United States.

(6) Foreign port is any War Department port without the continental limits of the United States whether within a foreign country or within the insular possessions of the United States.

b. Existing home ports and fleet of vessels:

(1) New York Port of Embarkation, Brooklyn, New York, U. S. Army transport vessels are—

(a) *Chateau Thierry* (passenger).

(b) *Republic* (passenger).

(c) *Ludington* (freight).

(d) *American Legion* (passenger).

(e) *Liberty* (freight).

(f) *Hunter Liggett* (passenger).

(2) San Francisco Port of Embarkation, Ft. Mason, California, U. S. Army transport vessels are—

(a) *U. S. Grant* (passenger).

(b) *St. Mihiel* (passenger).

(c) *Meigs* (freight).

(d) *Leonard Wood* (passenger).

8. Officer in charge (see fig. 1).—The designation “officer in charge of port” is intended to mean the commander of a port of embarkation or debarkation, commanding officer of a general depot when a primary port is located thereat, the officer designated as such by the department or expeditionary force commander at a primary port not located at a general depot, or the assistant superintendent at an outport, depending upon the official designation of the port.

9. Primary port.—*a. General.*—The Quartermaster General is charged with general jurisdiction and control of the operation of the Army Transport Service. In the United States operation of the Army Transport Service at a primary port located at a port of embarkation is in charge of a superintendent, Army Transport Service, under general direction of the port commander. Operation of the Army Transport Service at primary ports located at points within the jurisdiction of a department or expeditionary force commander is in charge of a superintendent, Army Transport Service, under direction of such commanders, except as indicated in paragraph 7a(3).

b. Organization.—General organization for each primary port is as follows, subject to such reduction in personnel as may be practicable (see fig. 1). At a small port or where the volume of work will per-

WATER TRANSPORTATION

mit, one officer or civilian employee may perform the duties of several of the officials named.

- (1) Officer in charge of port.
- (2) Superintendent, Army Transport Service.
- (a) Assistant superintendent, Army Transport Service.
- (b) Assistants (if authorized) for—
 - 1. Administration.
 - 2. Operation.
 - 3. Supply.
 - 4. Maintenance and repair.
- (c) Port purveyor.
- (d) Port steward.
- (e) Marine superintendent; assistant Marine Superintendent.
- (f) Superintending engineer; assistant superintending engineer.
- (g) Pier superintendent; assistant pier superintendent.
- (3) Port surgeon.
- (4) Port signal officer.
- (5) Port finance officer.
- (6) Port veterinarian.

10. Personnel.—*a. Status.*—Normally, the superintendent, assistant superintendent, assistants for administration, operation, supply, and maintenance and repair (if authorized) port surgeon, port signal officer, port finance officer, and port veterinarian are commissioned officers of suitable grade. The marine superintendent, superintending engineers and their assistants, port steward, port purveyor, pier superintendent and assistant pier superintendent are civilian employees.

b. Authority for assignment of commissioned officers.—The superintendent and his assistants are officers of the Quartermaster Corps and are designated by War Department orders generally on recommendation of The Quartermaster General. The port surgeon, port veterinarian, port signal officer, and port finance officer are assigned by War Department orders generally upon recommendation of The Surgeon General, the Chief Signal Officer, and the Chief of Finance, respectively.

c. Civilian employees.—(1) The Quartermaster General appoints the marine superintendent and his assistant, the superintending engineer and his assistant, the port steward, the port purveyor, and the pier superintendent and his assistant.

(2) Upon recommendations of the superintendent, the port surgeon, the port signal officer, the port finance officer, and the port veter-

inarian, the chiefs of their respective services authorize employment of such number of employees, clerical or others, as may be necessary in the discretion of each chief of service, to transact properly the business of the service at the port and on board transport. In cases of emergency, these officers will direct employment of additional employees and report their actions to their respective chiefs.

11. Duties and responsibilities.—*a. Superintendent.*—The superintendent has his headquarters at the port and, subject to the provision of paragraph 9*a*, is charged with the entire administration of the transport service thereat except in regard to such matters as relate to other services which are represented by the staff officers listed in paragraph 9*b*. He exercises supervision and control over the activities at the outports within the area under his jurisdiction. He is responsible for—

(1) Proper supervision over all water transportation equipment assigned to the port for its operation which includes all War Department-owned or controlled water transportation pertaining to the Army Transport Service.

(2) Employment and direction of stevedores engaged in loading.

(3) Control and operation of piers used in embarkation and debarkation of troops.

(4) Granting of privileges for berthing or tying up of outside vessels to piers under his control and causes such vessels to be billed in proper amounts for wharfage and other charges.

(5) Proper arrangement for moorings, docking, lightering, loading, and discharging of vessels at his port.

(6) Giving to and obtaining from the transport quartermaster or the quartermaster agent proper receipts for stores, property, and cargo consigned to or from and loaded or unloaded at the port.

(7) Making such allocations of funds, material, and personnel as may be required for efficient operation of the Army Transport Service at the primary port and at each of the outports in the area under his jurisdiction.

b. Assistants.—Such duties as may be assigned them by the superintendent.

c. Port surgeon.—Advisor to officer in charge of port in sanitary matters and in administration of the medical service at the port and on board transports. He is responsible for efficient administration of the medical department of the port and of the transports with headquarters thereat.

d. Port signal officer.—Advisor to officer in charge of port in connection with administration of the radio service. He will inspect

radio apparatus of transports upon their arrival at and previous to departure from each home port. He assures himself that efficient operators are provided and that suitable spare parts are on hand.

e. Port finance officer.—Responsible for proper accounting for and disbursing of all funds furnished for operation at his port, and also acts as property auditor for all activities within the port organization.

f. Port veterinarian.—Acts as advisor to officer in charge of port in all veterinary matters pertaining to the port. He maintains a veterinary service at the port similar to that at a post, camp, or station, and renders corresponding reports and returns. He arranges for necessary veterinary attendance on all animal transports.

g. Marine superintendent.—Under direction of the superintendent, the marine superintendent has personal charge of all transports at the home port; he supervises and directs their movements, their docking, and their loading. He also supervises repairs of the deck and those pertaining to the steward's department, and is responsible for care and maintenance of all transports under his charge to keep them in a condition of complete efficiency at all times and in all respects other than in matters pertaining to the superintending engineer. He also is responsible for discipline and efficiency of the deck department employees of all vessels; he inspects every transport on arrival and prior to departure and recommends to the superintending engineer, for submission to the superintendent, such interior repairs, alterations, or improvements as he may consider necessary or advisable in the interests of the service. He supervises the work of and directs the port purveyor in the discharge of his duties and performs such other duties as may be directed by the port superintendent.

h. Assistant marine superintendent.—Assists the marine superintendent in discharge of his duties and performs such other duties as may be assigned to him by the marine superintendent.

i. Superintending engineer.—The superintending engineer is responsible for care and efficient maintenance of all steam and mechanical appliances in the transports, and for repair, alterations, and improvements in hull or machinery that may be authorized. He makes a personal inspection of the machinery and mechanical appliances of each transport on its arrival at and again prior to its departure from his port, and recommends to the superintendent such repairs, renewals, and modifications as he deems needful; he is responsible also for discipline and efficiency of employees of the engineer's department of all vessels, and for economical and satisfactory working of machinery and steam and electrical appliances. He performs such other duties as may be directed by the superintendent.

j. Assistant superintendent engineer.—Assists the superintending engineer in discharge of his duties, and performs such other duties as may be assigned to him by the superintending engineer.

k. Port purveyor.—The port purveyor should be a person skilled in matters connected with supplies required in equipment and maintenance of seagoing vessels; he examines and passes upon requisitions for all departments and submits deck requisitions to the marine superintendent, the engineer's to the superintending engineer, and the steward's to the port steward; under direction of the marine superintendent, he inspects all supplies furnished on requisitions, and performs such other duties as may be assigned to him by the marine superintendent.

l. Port steward.—The port steward should be a person skilled in cabin and saloon equipment and their maintenance for seagoing vessels. He inspects refrigerators and subsistence supplies and store-rooms of transports to see that everything is in proper condition for reception and safekeeping of subsistence supplies. Upon arrival of a transport he inspects all perishable stores remaining on hand and recommends their disposition; in conjunction with the chief steward, he inspects all subsistence stores received for use aboard the transport and renders reports in all cases to the superintendent.

m. Pier superintendent and assistant.—The pier superintendent should be a person skilled in operation of piers. Under direction of the marine superintendent, he has charge and direction of all matters directly concerned with berthing of ships and supply of such requirements as water, steam, electricity, etc. He cooperates in arranging proper location and movement of cargo in, about, and from piers, and gives proper stowage and protection to all stevedore gear and hoisting facilities, and transports such items about the piers. He checks all fuel, water, light, and other supplies furnished to the piers under his direction, and is responsible for proper maintenance of guards to prevent pilferage or other theft from cargo. He has charge of all checkers, tallymen, or cargo inspectors working on his piers, and is responsible for receipt and delivery of all cargo from and to the ship's side, or from and to rail and public conveyances. He is the fire marshal for his pier and properly organizes all his workers as emergency firemen. He has full authority to cause removal from piers or into the open of all explosives, inflammable liquids, or other dangerous cargo, and affords United States customs inspectors every facility which the nature of their duties requires. The assistant pier superintendent performs such duties as may be assigned to him by the pier superintendent.

WATER TRANSPORTATION

12. Outports.—*a.* Organization of, duties of personnel at, and regulations governing outports conform to those prescribed for a primary port, except that the officer in charge is designated assistant superintendent, Army Transport Service, and is assigned by War Department orders ordinarily on recommendation of The Quartermaster General. Such of the personnel prescribed for a primary port is assigned to an outport as in the discretion of proper authority may be deemed necessary, considering size and importance of the port concerned; one person to perform functions of as many offices as volume of work permits.

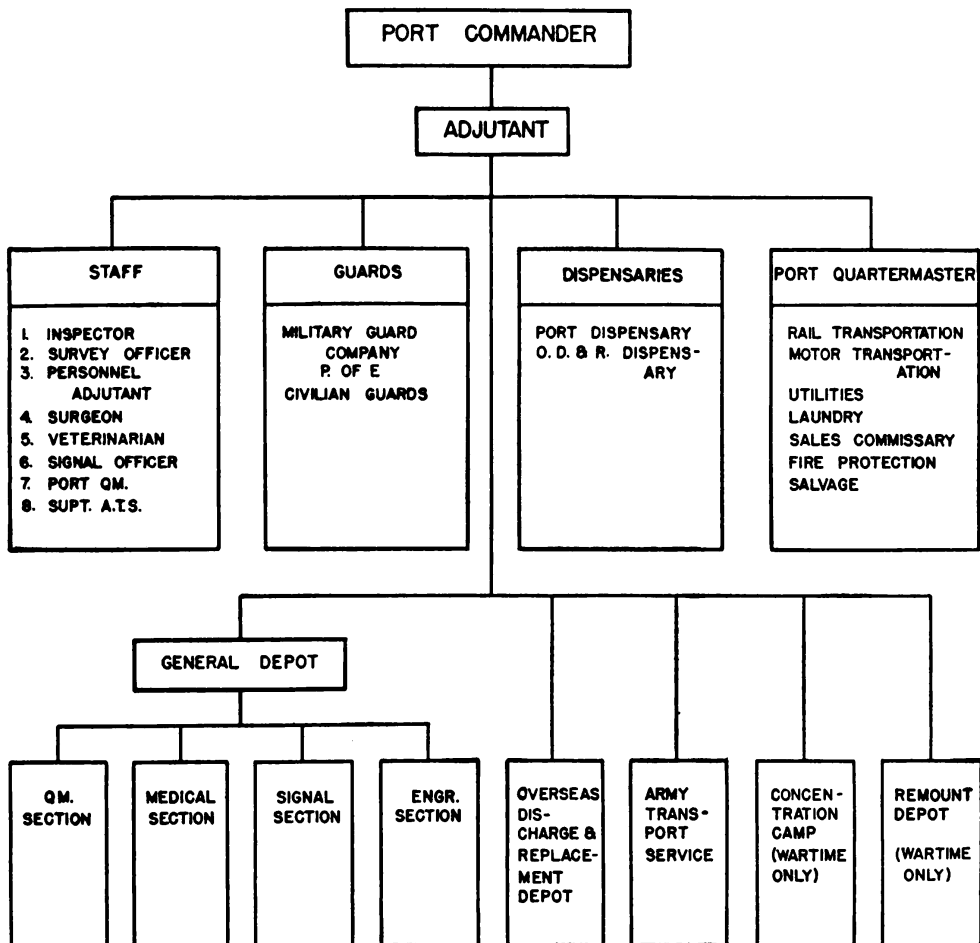


FIGURE 1.—Organization, port of embarkation.

b. The assistant superintendent at an outport submits all matters relating to the Army Transport Service and all requisitions for funds, supplies, and material necessary for the operation of the service at his port directly to the officer in charge of the primary port controlling his area.

c. At ports of minor importance where in the discretion of The Quartermaster General the services of a commissioned officer may be unnecessary, the representative may be a civilian employee of the quartermaster corps appointed by The Quartermaster General, whose designation will be United States Army Transport Agent and whose duties will be the same as those prescribed for an assistant superintendent at an outpost.

13. Organization.—a. *Port of embarkation*.—Figure 1 shows the typical organization of a port of embarkation.

b. *U. S. Army Transport Service*.—Figure 2 shows the typical organization of a U. S. Army Transport Service (peacetime).

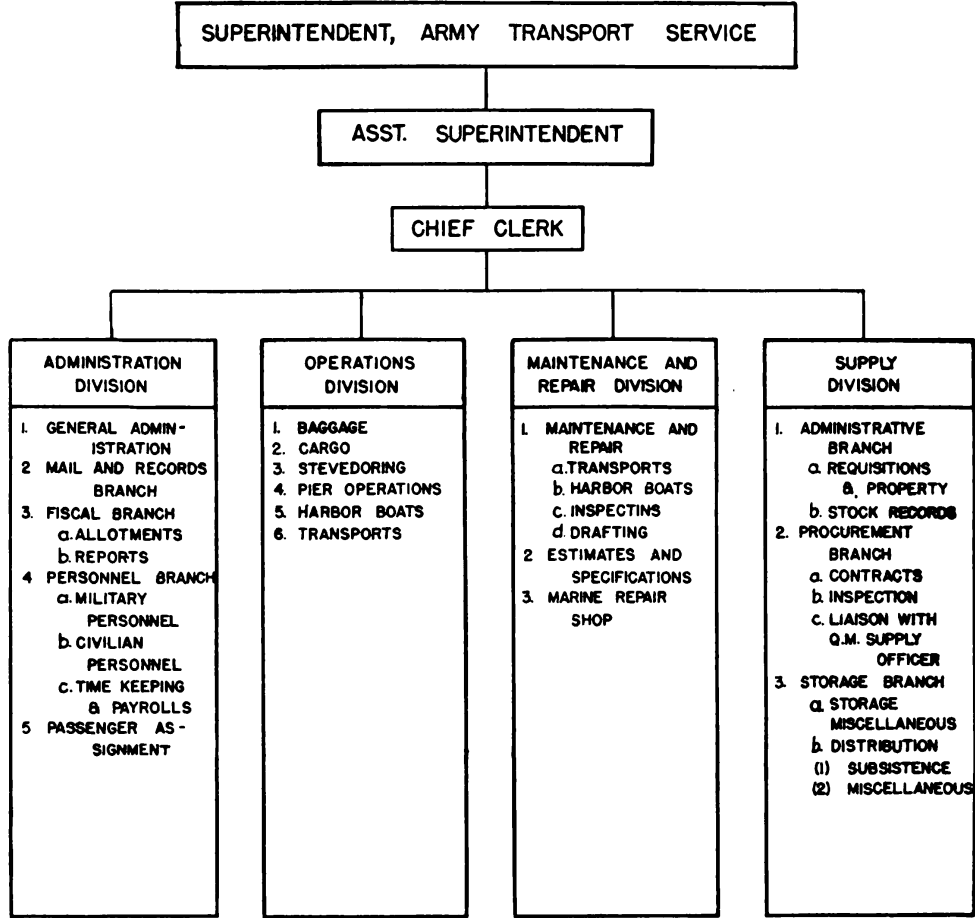


FIGURE 2.—Typical organization, U. S. Army Transport Service (peacetime).

SECTION IV

ORGANIZATION, ADMINISTRATION, OPERATION, AND
SUPPLY OF ARMY TRANSPORTS

	Paragraph
General	14
Military staff	15
Civilian staff	16
Supplies	17
Messes	18
Boat and fire drill, collision, or "man overboard"	19
Accident, damage, loss, or destruction of vessel or cargo	20
Inspecting, repairing, and painting vessels	21
In port	22
Flags, honors, and salutes	23
Reports	24

14. General.—The responsibilities for efficient administration, operation, and supply of Army transports are numerous. To prevent overlapping of responsibilities Army transports are organized into three distinct departments, namely, deck, engine, and steward's. Basically, the administration, operation, and supply activities aboard ship are directed by two distinct lines of authority, military and civilian. The military authority has its source in the Articles of War and Army Regulations whereas the civilian authority emanates from maritime laws, navigation rules, and responsibilities fixed by Army Regulations. In interpreting regulations pertaining to the Army Transport Service it must be borne in mind that the duties and responsibilities of the commanding officer of troops (as such), the master, and the transport quartermaster or quartermaster agent are separate and distinct and must not be confused. The duties of the commanding officer of troops pertain to functions of command in connection with all passengers and military personnel, whereas functions of the master pertain to navigation of the ship, management of the crew, and proper supervision over fueling and supplying so that the ship may carry out its mission economically and with safety to itself, its passengers, and its cargo. The functions of the transport quartermaster or quartermaster agent are those pertaining strictly to supply and administrative activities of the quartermaster corps. The commanding officer of troops and the master, each in his sphere, is supreme. The commanding officer of troops is acting quartermaster when no permanent quartermaster has been assigned, and is assisted by the quartermaster agent.

15. Military staff.—*a. Designation.*—The military staff aboard Army transports consists of—

- (1) Commanding officer of troops.
- (2) Transport quartermaster, or quartermaster agent.
- (3) Transport surgeon.
- (4) Transport dentist.
- (5) Transport chaplain.
- (6) Radio operator (enlisted).

b. Duties.—(1) *Commanding officer of troops.*—(a) The senior line officer traveling in a duty status on any passenger transport, whether a general officer or one of lower grade, is the commanding officer of troops, and assumes command of all military personnel on board, including all passengers. Assigned to each passenger transport is a permanent commanding officer of troops who functions in that capacity whenever he is the senior line officer on board. When he is not the senior line officer on board he functions as executive officer to the senior line officer and reports to him for duty as soon as the latter comes on board.

(b) He makes the necessary inspections of all passenger accommodations, troop compartments, and galleys to insure that efficient service is being rendered by the ship. He is the direct representative of the officer in charge of the home port, and all instructions concerning movement of the transport while in port are given through him. The commanding officer of troops is responsible for observance of Army Regulations by both military and civilian passengers, particularly those regulations pertaining to the Army Transport Service.

(c) All communications between the master and members of the crew with passengers are made through the commanding officer of troops, or through the transport quartermaster or quartermaster agent in the absence of a commanding officer of troops. Any instructions regarding safety or technical operation of the ship which is desirable to communicate to the troops are given by the master through the commanding officer of troops, or through the transport quartermaster or quartermaster agent in the absence of a commanding officer of troops.

(d) The commanding officer of troops has no jurisdiction over administration or discipline of the crew or technical operation or navigation and safety of the ship, these being under the navigation laws and rules of the United States, and the sole responsibility of the master. In cases where the crew requires disciplinary action, the commanding officer of troops refers the matter with his recommendations to the master who takes necessary action.

(e) Orders and instructions for conduct of enlisted men permanently attached to the ship are issued by or through the commanding officer of troops.

(f) Orders and instructions for conduct of all passengers and troops aboard ship are issued by or through the commanding officer of troops who works in conjunction with the master. Purely military orders and instructions for troops are issued by the commanding officer of troops.

(2) *Transport quartermaster or quartermaster agent.*—Assigned to each transport is a commissioned officer, usually of the quartermaster corps, as transport quartermaster. This officer is assigned by the officer in charge of the home port of the transport from among officers on duty thereat but only on specific instructions of the War Department. In case no transport quartermaster is assigned, the Superintendent, Army Transport Service, of the home port of the transport assigns a quartermaster agent who must be a Civil Service employee. Quartermaster agents are under the immediate supervision of acting quartermasters and are accountable for property and funds. Whenever possible the person selected for assignment as transport quartermaster or quartermaster agent should have the following qualifications: A reasonable amount of service in the Army or Navy, familiarity with the customs of the service in general, possess a thorough knowledge of the duties required of a quartermaster, sufficient tact and experience to meet the varying conditions arising aboard transport. Aboard ship, the transport quartermaster or quartermaster agent is a representative of the Superintendent, Army Transport Service, of the home port and as such is responsible for—

(a) Performance of all administrative duties and functions pertaining to the quartermaster corps, except those pertaining to—

1. Navigation or safety of the ship.
2. Control and administration of deck, engine, and steward's departments.
3. Control and discipline of members of the crew.

(b) Proper supply, care, and expenditure of all War Department stores and funds.

(c) Supplies and property required aboard ship.

(d) Preparation of all papers and reports required by law and prescribed by the Superintendent, Army Transport Service, of the home port which are connected with the duties and responsibilities of the quartermaster corps.

(e) Such other duties as may be required by the commanding officer of troops and by the Superintendent, Army Transport Service, of the home port.

(f) Transport quartermaster's or quartermaster agent's office and of all clerical work in connection therewith, and for conduct and efficiency of its employees. He should become thoroughly familiar with regulations of the service and orders and instructions issued from time to time and is responsible for their strict observance so far as duties and responsibilities delegated to him are concerned.

(g) When a transport quartermaster or a quartermaster agent is assigned to a ship the Superintendent, Army Transport Service, of the home port should instruct him in detail regarding preparation and submission of all papers, reports, and records required by regulations concerning personnel and their baggage on board a transport in order that when requested the transport quartermaster or quartermaster agent may be able to advise the commanding officer of troops in such matters. The transport quartermaster or quartermaster agent acts solely in an advisory capacity in such matters. This paragraph will in no wise be so construed as to relieve the commanding officer of troops of the responsibilities incumbent upon him for preparation and submission of papers, reports, and records.

(h) The transport quartermaster or quartermaster agent, when practicable and when requested, assists the transport surgeon in preparation of such reports as the surgeon is required to submit upon arrival at port of debarkation.

(i) The transport quartermaster or quartermaster agent keeps files of regulations and orders governing operation of Army transports.

(3) *Technical sergeant, Quartermaster Corps.*—When a technical sergeant, Quartermaster Corps, is assigned to a transport in addition to such other duties as may be required of him by the transport quartermaster or quartermaster agent, he is detailed also as subsistence and property storekeeper under direction of the transport quartermaster or quartermaster agent. He has charge of all storekeepers, storerooms, and stores except such stores as have actually been issued to chiefs of departments. He checks in or out all property and stores received or transferred from the transport, assisted by the storekeeper of the department to which the property pertains such as deck, engine, or steward's department. He prepares and submits to the transport quartermaster or quartermaster agent a daily list of stores issued from the various storerooms, expendable and nonexpendable articles listed separately.

(4) *Transport surgeon.*—Aboard ship the duties of the transport surgeon have a threefold character. He is—

(a) Commanding officer of the medical detachment.

(b) Commanding officer of the station hospital aboard.

(c) A member of the staff of the commanding officer of troops.

(5) *Transport dentist*.—The dental surgeon, under general direction of the port surgeon, home port, and the transport surgeon, renders necessary dental attendance for passengers of all classes and for the ship's officers and crew.

(6) *Transport chaplain*.—A chaplain when assigned to duty on a transport is charged with promotion of such activities of education, recreation, and moral training as may be practicable and desirable for the voyage, his duties being practically the same as those in post and garrison life. Transports are provided with suitable equipment for this purpose. The chaplain makes provision for the spiritual and moral welfare of members of the command as needs may require or the commanding officer of troops may direct and acts as a guide, counselor, and friend to all members of the transport's command, promoting morality, religion, and good order.

(7) *Radio operator*.—The commanding officer of troops, or the transport quartermaster where there is no commanding officer of troops, is charged with administration and discipline of radio operators attached to the ship when the operators are enlisted men, the master of the ship being charged with control and efficiency of such radio operators while on duty. If civilians, the master of the ship is charged with their control, discipline, and efficiency. Where there is neither a commanding officer of troops nor a transport quartermaster, enlisted radio operators are under control of the master. The ship's radio operator is responsible for proper conduct of radio service, for preparation of reports, maintenance of certain records, and care of station equipment in conformity with existing Army Regulations.

16. Civilian staff.—*a. General.*—(1) The civilian staff and operating personnel aboard Army transports consist of the following designations appointed to the competitive, classified service through certification by the Civil Service Commission or its duly authorized representatives:

(a) *Administrative department.*

Quartermaster agent.

Clerk, quartermaster, senior and junior.

Baggageman—embalmer.

Librarian and mimeograph operator.

(b) *Deck department.*

Master.

Chief officer (*Republic* only).

First officer.

Second officer.

- Third officer.
- Junior officer.
- Wheelman.
- Boatswain.
- Boatswain's mate.
- Carpenter.
- Carpenter's mate.
- Yeomen.
- Storekeeper.
- (c) *Engine department.*
 - Chief engineer.
 - First assistant engineer.
 - Second assistant engineer.
 - Third assistant engineer.
 - Junior engineer.
 - Plumber.
 - Assistant plumber.
 - Deck engineer.
 - Assistant deck engineer.
 - Electrician.
 - Assistant electrician.
 - Boilermaker.
 - Machinist.
 - Assistant machinist.
 - Refrigerating engineer.
 - Assistant refrigerating engineer.
 - Yeoman.
 - Storekeeper.
- (d) *Steward's department.*
 - Chief steward.
 - Second steward.
 - Third steward.
 - Troop steward.
 - Storekeeper.
 - Assistant storekeeper.
 - Yeoman.
 - Linenman.
 - Assistant linenman.
 - Master at arms.

(2) The above positions, including incumbents thereof, were classified under the Executive Order of October 11, 1924, and subsequently positions of a like character and stability of tenure may be added to

the above group and filled through certification upon agreement between the Secretary of War and the Civil Service Commission. All other employees on Army transports are appointed in accordance with Civil Service rules governing the particular class of service involved.

b. Quartermaster General provides civilian crews.—Civilian personnel employed as crews on War Department vessels will be provided by The Quartermaster General, except for vessels required for river, harbor, and fortification work under the Chief of Engineers.

c. Duties and responsibilities.—(1) *Master.*—The master is in supreme command of the ship and all persons on board who sign the ship's articles. This does not include the transport quartermaster agent and the quartermaster clerks who are not members of the ship's crew and do not sign the shipping articles. The master is responsible for and has paramount control of—

(a) Technical operation, navigation, and safety of the ship as required by navigation laws and rules of the United States.

(b) Safe delivery of passengers and cargo at destination.

(c) Discipline and efficiency of the crew, except enlisted men permanently attached to the ship.

(d) Assuming all duties and responsibilities prescribed for the transport quartermaster when there is no commanding officer of troops or transport quartermaster on duty on the transport. He is assisted by a quartermaster agent who is assigned to the transport when there is no transport quartermaster, and who, under the supervision of the master, performs the administrative duties prescribed for the transport quartermaster.

(e) In general, his responsibilities cover cleanliness and good condition of ship; that the vessel is seaworthy and properly fitted; readiness to sail at the appointed time; keeping of ship's log and other papers and reports required by law and prescribed by the Superintendent, Army Transport Service, of the home port.

(2) *Chief officer.*—On large transports where a chief officer is assigned, he acts as the executive officer of the ship. He relieves the master, assists him on the bridge in thick weather when approaching land or at any time when the master requests his services, and performs such additional duties as the master directs.

(3) *First officer.*—On vessels where a chief officer is not assigned, the first officer performs the duties specified for the chief officer. Under the master he is in immediate charge of the deck department. He is particularly responsible for good order and cleanliness of the ship, discipline and efficiency of the crew, and serviceable condition of all navigation and deck appliances. He keeps the ship's log and

writes it up carefully each day, giving the officer of the deck positive instructions to make a note of everything of importance so that the log may be a careful, detailed, and accurate record of current events.

(4) *Chief engineer*.—The chief engineer is charged with supervision and operation of the engine department and is primarily responsible for care and good management of all steam, propelling, pumping, hydraulic, refrigerating, electrical, auxiliary, and other apparatus on board and all air, water, and steam pipes for sanitary ventilating, heating, cooking, and other purposes. At sea he is responsible to the master for general supervision and conduct of his department. He has control over all persons in his department and sees that strict discipline and efficiency are maintained at all times.

(5) *Chief steward*.—The chief steward has charge of the cabins, saloons, mess rooms, galleys, pantries, and other adjuncts of the steward's department, with their furniture, equipment, and articles necessary for efficient service. He is required to supervise preparation and serving of meals. The steward's department is operated solely for the convenience, comfort, and accommodation of passengers and crew. Efficient service and courteous treatment will be rendered. The department is supervised and managed with a view to meeting these requirements. The chief steward sees that all laundry pertaining to the transport is properly listed and that a copy of the list accompanies the laundry in order that receipts may be given and taken.

17. Supplies.—*a.* The transport quartermaster or quartermaster agent is responsible that the transport is supplied at all times with—

(1) Necessary mess utensils, scrubbing and cleaning materials, disinfectants, etc.

(2) Necessary furniture, towels, and bed linen.

(3) Four brooms, four mops, and four buckets per company for issue to embarking organizations of a command.

(4) Sufficient quantity of blankets and clothing for loan to casuals, such clothing and blankets to be numbered properly for identification, the blankets with indelible ink in the center and on each corner.

(5) Sufficient number of lanterns with fuel therefor to afford light in case of accident to the electric plant.

b. Transoceanic transports carry rations, except perishable articles, sufficient for twice the normal requirement for the trip, considering the number of crew and passengers. Rations are of the type suitable for the several messes. Only sufficient perishable articles such as fresh beef, fresh vegetables, and fresh fruit will be put aboard to last the maximum normal trip or until such time as a fresh supply may be obtained.

c. As an additional reserve for emergency use, one 25-pound can of hard bread is carried at all times in each of the ship's boats. This should be examined frequently and issued before it becomes deteriorated, and then replaced by a fresh supply.

d. All lists of items for requisition, except subsistence stores, originated by the respective officers in charge of the several departments of the ship are submitted to the master who, if he approves them, refers them to the transport quartermaster or quartermaster agent for preparation of requisitions. The chief steward submits subsistence requisitions to the transport quartermaster or quartermaster agent direct.

e. The transport quartermaster or quartermaster agent submits all requisitions to the superintendent, home port, or to the officer in charge of the port at which the vessel may be. He also submits requisitions at ports en route for any stores required for completion of the voyage. In order that all necessary arrangements may be made at a port for furnishing fuel and supplies to a vessel immediately upon its arrival or in sufficient time before the scheduled hour of departure, the transport quartermaster or quartermaster agent advises the port concerned as far ahead of the arrival as possible of the quantities of fuel and other supplies which the vessel will need at the port.

f. The transport quartermaster or quartermaster agent is accountable for all public property and supplies received aboard the transport and maintains a property accountability system similar to that at posts and stations.

18. Messes.—The following messes are established when practicable on each ship of the Army Transport Service and on each hospital ship:

a. Saloon mess.—This mess is to accommodate the commanding officer of troops, transport quartermaster, surgeon, dental surgeon, chaplain, veterinarian, Army nurses, quartermaster agent, quartermaster clerks, and clerk embalmer assigned to the transport; all licensed officers; the chief steward; and all authorized persons traveling as first-class passengers.

b. Ship's mess.—(1) The persons subsisted in the ship's mess are the refrigerating engineer, assistant refrigerating engineers; deck engineer, assistant deck engineer; radio operators, civilian or enlisted; electrician, assistant electricians; plumber, assistant plumber; machinist, assistant machinists; boilermaker; carpenter; stewardesses; civilian veterinarian; baggageman embalmer; enlisted men assigned to duty upon the transport; and all persons authorized to travel

as second-class passengers (see sec. VIII as to classification of passengers).

(2) Enlisted men of the United States Navy and Marine Corps of grades corresponding to any of the above-mentioned Army grades.

(3) A special mess is provided on some transports for enlisted men's wives and other second-class passengers in order to relieve the crowded condition of the regular ship's mess. These messes are one and the same, except that they are located in different places. The same regulations apply to both.

c. Ship's petty officers' mess.—(1) The ship's petty officers' mess is for storekeepers, oilers, water tenders, boatswains, master-at-arms, boatswains' mates, assistant stewards, bakers, butchers, cooks, pantry-men, yeomen, scullions, messmen, watchmen, bell boys, porters, dish-washers, silverman, bathroom men, janitors, and post exchange employees.

(2) Waiters mess as directed by the chief steward, approved by the Superintendent, Army Transport Service, home port. The food supplied is of the same variety and kind as served in the ship's petty officers' mess and the cost charged to that mess.

d. Sailors' and firemen's mess.—This mess is for sailors, firemen, coal passers, deck boys, winchmen, sailors' and firemen's mess boys, cable hands, and stock tenders connected with the transport.

e. Hospital mess.—A hospital mess is established on hospital ships and may be established on transports when practicable for the transport surgeon to operate such a mess, in which are subsisted all persons sick in hospital. When no hospital mess is operated, persons sick in hospital will be subsisted from the mess to which the person belongs.

f. Troops' mess.—(1) *Composition.*—(a) *General.*—The troops' mess consists of the troops traveling.

(b) *Passengers with troop transportation.*—All passengers with troop transportation ordinarily are assigned to the troop mess, but the commanding officer or troops, or the transport quartermaster or quartermaster agent in case there is no commanding officer of troops, may in his discretion assign any such passenger to the ship's petty officers' mess, provided the passenger elects to pay the increased charges for meals.

(2) *Mess personnel.*—The troops' mess is operated by the steward's department of the transport. A suitable line officer is detailed as mess officer by the commanding officer of troops. If considered necessary, an assistant mess officer also is detailed by the commanding officer of troops. Such noncommissioned officers and such assistants

to cooks and bakers and such kitchen police and waiters as are required are detailed by the commanding officer of troops.

19. Boat and fire drill, collision, or "man overboard."—*a. Boat drill.*—Cards are posted in each stateroom and troop compartment assigning the occupants thereof to stations for boat drills. As soon as practicable after leaving port, the master orders a life preserver and boat drill to be participated in by all passengers and the ship's company. The commanding officer of troops is responsible for the inspection of all passengers. This drill is repeated at least once each week while at sea.

b. Fire drill.—The crew must be organized for fire service and drilled weekly in use of fire appliances. In case of fire the most important and essential thing is silence and order, quiet waiting for orders, and prompt and orderly execution of them. Any person discovering fire should make it known quietly and immediately to the officer of the guard who causes the bugler of the guard to sound "Attention" followed by fire call. The commanding officer of troops is notified at once and will go on deck to preserve order and to render assistance to the master in any measures that may be necessary.

c. Collision.—In case of collision, "man overboard," or other form of danger, all passengers, except such men as may have been detailed for boat service, at once stand at attention and preserve silence. Upon receipt of proper orders commands form promptly and quietly in their designated places.

d. Recall.—Recall is sounded in case of fire or collision when the danger is past; in the case of "man overboard" when the lifeboat has been hoisted up. Recall is sounded only by order of the commanding officer of troops.

20. Accident, damage, loss, or destruction of vessel or cargo.—*a.* In case fire, collision, or grounding of any War Department vessel whose home port is within the continental limits of the United States, or of damage, loss, or destruction of such vessel or the cargo thereof, or in the case of any such occurrence between a War Department vessel and any other vessel which by any possibility may bring into existence a right of action or liability on the part of the United States, immediate report must be made setting forth the circumstances of the occurrence and the extent of damage to the War Department vessel. If practicable to obtain the information, the extent of damage to any other vessel involved should be stated and if the War Department vessel is damaged or disabled, it should be stated whether or not the damage can be remedied at the port at which the vessel may be and the probable date upon which the vessel

may be placed in proper condition to proceed to sea. The above report is submitted by the master as follows:

(1) When occurring at a port within the continental limits of the United States, the report is made to the commanding officer of the home port of the vessel.

(2) When occurring at a foreign port which is within the jurisdiction of the commanding general of an expeditionary force or of a department commander, the report is made to the commanding officer of the army activities at that port.

(3) When occurring at a foreign port which is not within the jurisdiction of an expeditionary force or a department commander, the report is made through the American embassy or consular agent to The Adjutant General of the Army.

(4) When occurring at sea, the report is made to the officer in charge of the home port.

b. Immediately after the initial report has been made the commanding officer of the port concerned convenes a board of officers to make full investigation of the occurrences, securing a complete statement from the master and every person having knowledge of the circumstances. All available evidence and information as to cause of the occurrences, extent of the damage, etc., and the responsibility therefor, and the conclusions of the board in the entire matter, including responsibility, should be covered in this report. AR 30-1300 publishes a specimen report of collision.

c. In case of any marine disaster involving any vessel, canal boat, barge, or lighter, whether seagoing or used on lakes, rivers, or in inland navigation, owned or chartered by the War Department, as a result of which disaster claims for damage to or loss of property, bodily injury, or loss of life have been filed or are likely to be filed exceeding in their aggregate amount the value of the vessel owned or chartered, the master of such vessel immediately will forward a copy of the report for above direct to The Adjutant General for transmission to The Judge Advocate General for appropriate action. Under the Suits in Admiralty Act (43 Stat. 1112; 46 U. S. C. 781-790) the United States may be sued for damages caused by public vessels, but under the Limitation of Liability Statutes (46 U. S. C. 183-188) it may in certain cases limit its liability provided that within 6 months after a claimant has given to or filed with it written notice of claim a petition for limitation of liability is filed in a district court of the United States of competent jurisdiction.

21. Inspecting, repairing, and painting vessels.—*a.* The maximum effort of the vessel's crew is utilized in effecting all minor

repairs that can be made by the crew. Each transport in commission is placed in drydock for bottom cleaning and painting; overhauling of sea valves, strainers, and stern bearing; examination and repair as necessary of propeller, tail shaft, rudder, zinc plates, scupper valves, and other underwater parts every 6 to 9 months, this work being done preferably when the vessel is in its home port and when its services can best be spared for such purpose. The master, chief engineer, and chief steward of each transport keep a list of all repair work required in their respective departments. At the proper time each department chief prepares the required number of copies and when approved by the master they are given to the transport quartermaster who delivers them to the Superintendent, Army Transport Service, of the port for appropriate action.

b. Specifications covering the approved work are then prepared and the required services obtained through advertising for bids.

22. In port.—*a.* Within 24 hours after arrival of the ship at a terminal port, the commanding officer of troops calls at the office of the officer in charge of the port for any official communications that may be held there for him, and for any other business that such officer may wish to transact with him.

b. Upon arrival of an Army transport at a foreign port, the commanding officer of troops as the representative of the War Department, accompanied by the master, promptly calls in person at the United States embassy or legation if there is one in the port. He accompanies the master when the latter calls at the United States consulate for the purpose of reporting arrival of the ship at the port, and of leaving a copy of the crew list with the consular office.

c. Office hours for the transport quartermaster's or quartermaster agent's office while the transport is in port are from 9:00 AM to 12:00 M, and from 1:00 PM to 5:00 PM daily, Sundays and holidays excepted, on which days at least one clerk is required to be on duty during office hours for transaction of official business. All officers and crew must be aboard ship at least 6 hours prior to scheduled hour of sailing.

d. In order that the ship may be available to go to sea in case of emergency or ready to sail ahead of original schedule time if necessary, and to avoid as much as possible interference with handling the cargo just before sailing, all ships are bunkered as soon as practicable after arrival at port.

e. As to visits of courtesy in general, see AR 605-125.

23. Flags, honors, and salutes.—*a. Flags.*—(1) Each Army transport is equipped with the ensigns, lieutenant generals', major

generals', and brigadier generals' flags, jacks, commission pennants, Army transport and other appropriate flags and pennants as specified in AR 260-10.

(2) There should be on board two complete sets of international code signal flags, and flags of foreign nations for use in the ports of such nations as the transport may visit.

(3) The national ensign is flown from the stern staff from sunrise to sunset when a transport is tied up at a pier or at anchor. When flown while the transport is under way, it is flown from the gaff end of the aftermost mast. The Union Jack is flown from the jack staff only when the transport is at anchor or tied up at a pier; never while the ship is under way.

(4) The flag of the Army Transport Service is of red, white, and blue bunting. Detailed description of this flag is set forth in AR 260-10.

b. Honors and salutes.—The provisions of AR 600-25 and 600-30 regarding honors and salutes, except salutes with cannon, are carried out as fully as practicable on all transports.

24. Reports.—*a.* The commanding officer of troops of a War Department ship bound for a United States port or for a foreign port that is a base for an expeditionary force or that is within a department reports by radio to the commanding officer of the port the date and hour of expected arrival of his ship at the channel entrance to the port. The report is rendered 48 hours before estimated arrival at the port or as soon thereafter as possible, and includes the number each of first, second, and troop class passengers; number of prisoners; sick; number each of officers and enlisted men of the Army, Navy, and Marine Corps; designations of organizations aboard; number of measurement tons of freight, to whom consigned, and where stowed; number of sacks of registered mail and number of sacks of other mail. The sick are reported separately as "mental cases" and "total other sick." This report also gives information as to the presence or absence of infectious diseases on board, giving in each class nature of infection or infections, date of appearance of first and last cases, number of cases, location of infection as to class of passengers and arm or service, and in the case of way ports whether through passengers or passengers to disembark. In the event the port of arrival or departure is a foreign port not within the jurisdiction of a commander of an expeditionary force or a department, the commanding officer of troops renders these reports by cable or radio through the American consul or consul

agent of the port, to The Adjutant General for transmittal to the chief of the arm or service concerned.

b. The list of reports to be rendered by the transport quartermaster or quartermaster agent on arrival and departure of transports in general relates to the ship's crew, passenger list, manifest, baggage and parcel list, etc., and is prepared on the particular form and in the number prescribed by current instructions contained in Army Regulations and Cir. 1-12, Office of The Quartermaster General.

SECTION V

HARBOR BOAT SERVICE

	Paragraph
Classification.....	25
Maintenance and operation.....	26
Purpose.....	27
Personnel	28
Hours of duty.....	29
Responsibility for troops.....	30
Supplies	31
Mine planters.....	32
Coast artillery boats.....	33

25. Classification.—Freight and passenger vessels include ferries, freight and passenger vessels, tugs, launches, water boats, barges, and other small craft. Coast artillery vessels include mine planters, distribution box boats, and motor mine yawls. Air Corps vessels usually are included with launches but a subclassification for the particular service rendered includes shallow draft, picket, crash, and utility boats.

26. Maintenance and operation.—The Quartermaster General provides, maintains, and has jurisdiction over all harbor boats, except those otherwise exempted, and directs operation of all such vessels, except that vessels assigned to chiefs of arms and services of the War Department, commanders of corps areas, departments, or expeditionary forces are operated under the direction of such officers.

27. Purpose.—*a.* Freight and passenger vessels are used for transportation of personnel and supplies of the Army between posts or ports on the seacoast or waterways and their neighboring cities or commercial centers.

b. Coast artillery vessels are assigned to the coast defenses primarily for training of the mine defense personnel and for use in time of war in installation and maintenance of approved submarine mine projects. In order that maximum return may be obtained for

expenditures made in connection with operation and maintenance of these ships, they should be used to the fullest extent consistent with proper training of the mine defense personnel for general transportation purposes, including transportation of freight and passengers, vessel tracking, and target towing.

c. Air Corps vessels are used for rescue work in case a plane goes down in practice flying over water. They vary in type according to the depth of water over which the flying is done.

28. Personnel.—*a.* Civilian crews required on freight and passenger vessels and Air Corps vessels are provided by The Quartermaster General. Ship's officers consist of master, mate, engineer, and assistant engineer. On boats not provided with an assistant engineer but provided with an oiler, it is the policy to employ only oilers who have an assistant engineer's license. It is the policy to fill vacancies in higher grade positions by promotion of employees in lower grade positions who have proven their ability and have obtained the necessary licenses. A seniority list of the licensed officers in the Harbor Boat Service is maintained in the office of The Quartermaster General from which promotions are made. Vacancies not filled by promotion are filled by selection of personnel in accordance with Civil Service rules and regulations, the provisions of which must be strictly complied with. Boats not supplied with civilian crews are operated by military crews.

b. Coast artillery vessels are manned by military personnel. The senior commissioned officer of the Coast Artillery Corps assigned to a mine planter is the commanding officer of the ship. The ship's officers are warrant officers, namely, master, chief engineer, first mate, assistant engineer, second mate. The crew are enlisted men of the Coast Artillery Corps.

29. Hours of duty.—*a.* Except in cases of real emergency, harbor boats must not be operated with crews on duty in excess of an average of 8 hours per day or an average of 44 hours per week, with the enforcement of this average spread over a 3-month period. In other words, the standard is a limit of 572 hours per 3-month period

$$\frac{44 \times 52}{4} = 572$$

b. The hours of duty of a crew and schedules for a vessel are usually prescribed in written orders of the post or station commander or other responsible officer. The time consumed with crew on duty whether a vessel is actually under way or not is computed from the time when a majority (over 50 percent) of the crew is excused from duty after the boat has been laid up for the night. If a boat is lying

at wharf during the noon meal aboard or the crew excused from duty to obtain their noonday meal ashore, the actual time the crew is off duty will not be included in the hours of duty; this provided no work is being accomplished by a majority of the crew.

c. When it becomes necessary to exceed temporarily the maximum allowance of hours to meet proper official requirements, explanation is made in the column of "Remarks" on the service report of the vessel.

30. Responsibility for troops.—The senior Army officer or non-commissioned officer present on board is responsible for conduct and discipline of troops on board. Any failure of military officers to enforce this regulation or of troops to observe orders given must be reported by the master of the vessel to the proper authority.

31. Supplies.—*a.* The master submits requisitions for all supplies, materials, and stores required by all departments on board. The chief engineer is responsible for proper supply of his own department, submitting necessary requirement lists to the master for requisition.

b. Supplies for harbor boats, including fuel and fresh water, are obtained from the following sources:

(1) By requisition submitted to the quartermaster at the home port of the vessel, when there.

(2) By requisition (when vessel is away from home port) submitted to a quartermaster either at or in the vicinity where the vessel is serving. Requisition should show the procurement authority of the home station to which the supplies or services are chargeable.

(3) By purchase in open market, at lowest obtainable rates, after inviting competition verbally or otherwise, when necessary supplies cannot be obtained as authorized in (2) above.

c. Supplies should be obtained at the home port as far as possible, all requirements for a trip being anticipated before the vessel leaves the home port, and the obtaining of supplies at other points being kept to the minimum required to meet emergencies, unforeseen circumstances, or the peculiar nature of the duties upon which the vessel may be at the time.

d. The master and chief engineer of each boat sign receipts for its supplies and are held strictly accountable for the safe care and proper use of all such supplies in their respective departments.

32. Mine planters.—*a. Assignment.*—United States Army mine planters are permanently assigned to corps areas and departments and to home harbor defense stations therein by the Secretary of War upon recommendation of the Chief of Coast Artillery.

b. Control.—(1) *Beyond limits of a harbor defense.*—During the time a mine planter is beyond the limits of a harbor defense it comes under direct control and supervision of the corps area or department commander. At such times corps area and department commanders have the same control over a mine planter as they have over any other element of the harbor defenses within the limits of their corps areas or departments, subject to requirements prescribed by the War Department.

(2) *On duty in a harbor defense.*—While on duty in a harbor defense a mine planter comes under general control and supervision of the harbor defense commander. The commanding officer of the mine planter retains command of the ship, but it becomes a part of the local submarine mine defense equipment of the harbor defense. Mine planters assigned to and on duty in the harbor defenses constitute elements of the command and are subject to such assignment as the harbor defense commander deems proper unless otherwise directed by higher authority.

33. Coast artillery boats.—*a.* Distribution box boats and motor mine yawls are part of the submarine mine equipment pertaining to the harbor defenses and are assigned by harbor defense commanders to mine groups for their care and use.

b. The mine group commander will himself take direct charge of the boats or will designate an officer under his command for that duty.

SECTION VI

CHARTER OF COMMERCIAL VESSELS

	Paragraph
General.....	34
Charters.....	35
Owner's obligation as to condition.....	36
Survey.....	37
Inventories.....	38
Repairs.....	39
Removal of equipment, etc.....	40
Execution of charter.....	41
Disposition of survey, inventory, etc.....	42
Change of form of charter.....	43
Ocean tonnage.....	44
Marine disaster involving chartered vessel.....	45

34. General.—*a.* Commercial vessels, as necessary and available, are chartered and refitted for troops and animal service and assigned to the several ports to supplement the regularly owned service. Detailed surveys of all ocean shipping of United States registry are

on file in the War and Navy Departments, and existing ports of embarkation should have information as to scheduled arrivals and departures of vessels in the adjacent commercial port area.

b. Standard specifications for hasty conversion of commercial vessels for use as troop and animal transports and forms of contracts (charter) are on file in the office of The Quartermaster General; in the office of each Superintendent, Army Transport Service; or local quartermasters near important ports in the United States. Additional copies may be furnished by air mail where needed. As these specifications are based on use of standard commercial fittings and materials readily secured locally in shipping centers, acquisition and conversion of vessels may be expeditiously carried out either by the corps area commander or by telegraphic instructions from the War Department.

35. Charters.—Privately owned vessels when requisitioned or chartered in the usual way by the Government for and on account of the Quartermaster Corps of the War Department are taken over under charter party on the prescribed forms.

a. *Time charter.*—Under the time form of charter the owner maintains in seaworthy condition and operates the vessel for the War Department, furnishing at owner's expense all tools, equipment, supplies, and services, and also employs, pays, and discharges the master, officers, and crew, and is charged with the upkeep of the vessel.

b. *Bare boat charter.*—Under the bare boat form of charter the United States takes over and operates the vessel, furnishing all provisions, fuel, and water; pays, hires, and discharges the master, officers, and crew, and is charged with the upkeep of the vessel.

c. *Subsistence rates on chartered vessels.*—When commercial vessels are chartered for transportation of troops or supplies, arrangements for subsistence of troops and any civilian employees who may travel on such vessels will provide that the rates charged to officers of the Army on board such vessels will not exceed the rates charged in like cases on board regular Government transports.

36. Owner's obligation as to condition.—Under either form of charter the vessel when accepted by the United States must be or must forthwith be made by and at the expense of the owner tight, strong, and well and sufficiently tackled, appareled, furnished, and equipped, and in every respect seaworthy and in good running order and condition, fit for the service in which she has usually been employed. The instructions given in this section must be carefully and thoroughly followed, as neglect in preparing and preserving a complete detailed record of the condition of the vessel at the time she is

taken over, together with a complete detailed inventory, may cause annoyance and loss to the Government at the time of redelivery of the vessel to the owner.

37. Survey.—*a.* Upon receiving orders to take over a vessel from a private owner, the officer charged with this duty, hereinafter called chartering officer, should call upon the owner, delivering to him a copy of the requisition order, and arrange with the owner to make a survey of the physical condition of the ship and its machinery. The chartering officer should require the superintending engineer of the Army Transport Service at the nearest port to detail one or more marine experts experienced in hull and deck departments of oceangoing vessels and one or more marine experts holding license as chief engineer of oceangoing steam vessels and experienced in operation, repair, and maintenance of the steam engine department of oceangoing steam vessels who, in conjunction with the chartering officer and the owner or his representative, should make a full, complete, and detailed survey of the physical condition of the ship, its equipment, and machinery. This survey should specify condition of each element and unit in the ship, whether excellent, good, fair, or poor, and if any element or unit is found other than excellent, it should specify in detail its exact condition; for example, if the bearing of a crank shaft of the main engine were found to have been burned out and the metal run, it would not be sufficient to show the main crank shaft as being "poor," but it would be necessary to have survey show in what respect it was poor, that is, by specifying exact condition in detail. The survey involves opening up for inspection all engines, machinery, and auxiliaries for examination, and testing by operation all machinery and appliances. The vessel must also be drydocked for survey and report made on underwater parts, including measurement of extent to which tail shaft is down, condition of paint on bottom, and any plates set up or indented, any seams or rivets leaking, and any bilge keels broken, bent, or loose.

b. This survey should be certified as correct as of the date taken by the chartering officer, the superintending engineer or his assistant, and the owner or his representative. In the event the owner does not agree as to any item or items of the survey or refuses to sign such survey, a detailed statement as to disputed items signed by the owner or his representative should be obtained. If the owner refuses or neglects to make such statement, a detailed report as to items not agreed upon must be appended to the report of survey.

c. There should be embodied in the report of survey a brief statement of the history of the vessel, including its name, type, deadweight

tonnage, gross tonnage, passenger capacity; speed in knots per hour; consumption of coal or oil per 24 hours; service in which the vessel has been engaged; a statement of accidents, groundings, collisions, etc., within the past year; when last drydocked; when last painted from truck to water line; when bottom last scaled and painted; when water tanks last scaled, cleaned, cement washed, and tested for tightness; when tail shafts last drawn; and a copy of United States inspection certificate; copy of hull board report on last drydocking, and a copy of classification certificate and when classification expires appended.

d. The report of survey should be accomplished in accordance with a model form to be furnished by The Quartermaster General.

38. Inventories.—The port steward and quartermaster purveyor in company with the chartering officer should make a complete inventory of the consumable stores, provisions, coal, oil, and water, as well as of all furnishings, spares, tools, and supplies on the vessel. This inventory must be checked with the inventory furnished by the owner under terms of the charter and, in case it does not agree in all respects with the owner's inventory, the owner's attention should be called to any discrepancies and if not corrected, a full and detailed report of the items of difference should be made.

39. Repairs.—As it is the duty of the owner to deliver the vessel to the Government in every respect seaworthy and in good running order and condition, immediately upon completion of the survey the owner should be notified in writing to accomplish such repairs as may be necessary to make the vessel seaworthy and place her in good and efficient running order. This notice contains a detailed statement of the work demanded by the Government and is prepared by the superintending engineer and signed by him as well as by the chartering officer. In the event that the owner does not at once comply with the notice to make the vessel seaworthy and place her in good and efficient running order or in the event the Government deems it expedient to accomplish the repairs itself, such work is directed by the chartering officer to be done under supervision of the superintending engineer and charged to the owner, the charges being deducted from the charter hire. An accurate record of the cost of such repairs must be kept.

40. Removal of equipment, etc.—In the event the Government removes from the vessel any of its furnishings, equipment, appliances, furniture, machinery, or installations, the superintending engineer must cause all such articles to be carefully boxed or crated and properly labeled with the name of the ship and list of contents,

and stored in a safe place for preservation until time of redelivery of vessel to owner. The lists of contents are made in quadruplicate, showing all removals and giving contents of each box or crate with place where stored, one copy of which is delivered to The Quartermaster General, one copy to owner of the vessel, one copy placed with the ship's papers, and one copy filed with the officer in command at the port where the removals are made.

41. Execution of charter.—*a.* The chartering officer has the charter executed by the owner and by himself for the United States in triplicate, one copy for the General Accounting office, one copy for The Quartermaster General, and one copy for the owner.

b. The owner should be warned against stating a false or fictitious value for his vessel, and should state the true value of the vessel considering its age, history, and present condition.

42. Disposition of survey, inventory, etc.—The original and three copies of the survey, inventory, and reports connected therewith are forwarded to the officer in charge of the designated home port who sends one copy of each to The Quartermaster General, one copy to the owner of the vessel, and one copy is placed with the ship's papers.

43. Change of form of charter.—In the event a boat has been under time charter and is to be taken over on bare boat form, all the steps heretofore outlined by way of survey, inventory, etc., should be performed as if the boat were coming into Government service for the first time.

44. Ocean tonnage.—*a.* The five kinds of tonnage in use in the shipping business are dead-weight, cargo, gross, net, and displacement.

(1) Dead-weight tonnage expresses the number of tons of 2,240 pounds that a vessel can transport of cargo, stores, and bunker fuel. It is the difference between the number of tons of water a vessel displaces light and the number of tons it displaces when submerged to the load water line. The term, dead-weight tonnage, is used interchangeably with the term, dead-weight carrying capacity. A vessel's capacity for weight cargo is less than its total dead-weight tonnage.

(2) Cargo tonnage is either weight or measurement. In this connection the ton is usually 2,240 pounds avoirdupois, but it may also signify a metric ton of 2,204.62 pounds. A measurement ton is usually 40 cubic feet or 1.133 cubic meters, but in some instances a larger number of cubic feet is taken at weight or measurement (W/M), ship's option.

(3) Gross tonnage applies to vessels, not to cargo. It is determined by dividing by 100 the contents in cubic feet of the vessel's closed-in spaces. A vessel ton is 100 cubic feet. The register of a vessel states both gross and net tonnage.

(4) Net tonnage is a vessel's gross tonnage minus deductions of space occupied by accommodations for crew, by machinery for navigation, by the engine room, and by fuel. A vessel's net tonnage expresses space available for accommodation of passengers and stowage of cargo. A ton of cargo in most instances occupies less than 100 cubic feet; hence the vessel's cargo tonnage may exceed its net tonnage and the tonnage of cargo carried is usually greater than the gross tonnage.

(5) Displacement of a vessel is the weight in tons of 2,240 pounds of the vessel and its contents. Displacement light is the weight of the vessel without stores, bunker fuel, or cargo. Displacement loaded is the weight of the vessel, plus cargo, fuel, and stores.

b. A vessel's registered tonnage, whether gross or net, is practically the same under the American and the British rules. When measured according to the Panama or Suez tonnage rules, most vessels have larger gross and net tonnage than when measured by British or American rules. Comparable statistics on the relation between various forms of tonnage may be found in any approved work on ocean shipping.

c. Displacement and dead-weight tonnage is often used for statistical purposes (including cost comparisons) for legal and taxation purposes, and for charges for services rendered, that is, pilotage fees, etc. These terms are also used for a description of vessels as follows:

(1) In actual building of the ship, dead-weight tonnage is one of the most important factors.

(2) For vessels engaged in carriage of heavy commodities, dead-weight tonnage serves as an approximate measure of size and capacity.

(3) In ocean charters it is common to base the remuneration for hire of the vessel upon the dead-weight tonnage of the vessel. The U. S. Shipping Board paid from \$5.75 to \$7.00 per dead-weight ton per month for vessels requisitioned during the World War for Government purposes.

(4) Displacement tonnage may be used as a means of calculating cargo on board and cargo discharged.

(5) The following table shows the comparison of tonnage for the nations indicated as of December 31, 1938:¹

¹ United States Maritime Commission, Division of Research, December 9, 1939.

OCEANGOING MERCHANT FLEETS OF UNITED STATES, GREAT BRITAIN, FRANCE, AND GERMANY

(Iron and steel, steam and motor vessels 2,000 gross tons and over)

	Total			Combination			Freighters			Tankers		
	Num- ber	Gross tons	Dead- weight tons	Num- ber	Gross tons	Dead- weight tons	Num- ber	Gross tons	Dead- weight tons	Num- ber	Gross tons	Dead- weight tons
United States----	1, 328	8, 028, 642	11, 620, 500	146	1, 274, 214	1, 071, 500	818	4, 099, 693	6, 361, 100	364	2, 654, 735	4, 187, 900
Great Britain----	2, 554	16, 251, 724	22, 108, 000	335	3, 831, 061	2, 920, 300	1, 809	9, 507, 247	14, 847, 200	410	2, 913, 416	4, 340, 500
France-----	420	2, 419, 565	2, 685, 900	111	1, 080, 395	702, 000	266	1, 045, 321	1, 551, 700	43	293, 849	432, 200
Germany-----	564	3, 348, 273	4, 341, 600	110	1, 175, 779	986, 500	428	1, 959, 489	3, 045, 600	26	213, 005	309, 500
Total-----	4, 866	30, 048, 204	40, 756, 000	702	7, 361, 449	5, 680, 300	3, 321	16, 611, 750	25, 805, 600	843	6, 075, 005	9, 270, 100

NOTE.—Excludes Great Lakes vessels and special types. All figures subject to revision.

45. Marine disaster involving chartered vessel.—In case of any marine disaster involving any vessel chartered by the War Department, the action required is the same as prescribed for Government-owned vessels in paragraph 20.

SECTION VII

REDELIVERY OF CHARTERED VESSELS

	Paragraph
General	46
Letter of notification.....	47
Board of survey.....	48
Basis of dealing with owners.....	49
Time allowance	50
Form of charter.....	51

46. General.—When a vessel under charter is to be redelivered to the owner The Quartermaster General advises the officer in charge of the port where redelivery is to be made of that fact, designating the date set for redelivery and directing him to accomplish the redelivery. Upon receipt of this advice, the officer in charge of the port advises the owner of the vessel and any other parties interested and appoints a board of survey and an inventory board. In case the vessel has not yet arrived at the port, he radios advice to the master of the intention to redeliver the vessel and instructs him to make such preparations for it as can be made before arrival, including an inventory statement of consumable stores.

47. Letter of notification.—The letter to the owner informs him of the intention to redeliver the vessel as soon as practicable after completion of the present voyage. He is advised of the probable date of arrival of the vessel at the port and of the actual date of arrival as soon as it is known. He should also be advised that in case he alleges damages to the vessel for which the War Department is responsible, he must submit in writing without unnecessary delay a verified claim giving in detail the items of such damage with the cost and proof thereof; that the claim should be complete, representing the entire claim of the owners and the claim should so state; also, that it is desirable that the owner or his representative be present during the survey of the vessel by a board convened for the purpose of free consultation with members of the board in regard to any damages to the vessel while in the service of the War Department and for conference to determine a just settlement or the just lump sum to be paid by the Government in lieu of reconditioning the ship.

48. Board of survey.—*a. Function.*—The board of survey consists of three officers and should be provided with the services of any necessary technical advisors. Its duties will be to survey the vessel to determine the actual damages, if any, sustained by it while in the service of the War Department; to estimate cost of repairs necessary to recondition the vessel in accordance with terms of the charter; and to determine the lump sum settlement regarded as just compensation to be paid the owner in lieu of repairs. In preparing their report, the board of survey considers inventories and statements of consumable stores.

b. Forwarding report.—The report of the board of survey is forwarded to The Quartermaster General through the officer in charge of the port. The latter forwards with the report any recommendations he may wish to make thereon. Final action is taken on all reports by The Quartermaster General acting for the Secretary of War. The Quartermaster General also takes the necessary steps to cause any payments to be made to the owners which he may approve based on these reports.

49. Basis of dealing with owners.—All dealings with the owners should be on a basis of claims submitted by them and should consist of approving or disapproving each item in the light of the facts obtained from the War Department's investigation.

50. Time allowance.—A rule for estimating time allowance or demurrage is to determine the period required to accomplish the repairs on Government account and deduct from this the length of time required to complete repairs to be made on owner's account. For example, if the Government repairs require 20 days, owner's 10 days, the time allowance should not exceed 10 days, and if the Government repairs require 10 days and the owner's repairs 20 days, there should be no time allowance granted whatever.

51. Form of charter.—*a.* The form of charter should be considered with reference to obligation of the War Department for reconditioning. When a vessel is manned by the owner under a time charter, he is responsible for maintaining the vessel in an efficient state and operating it. Repairs which become necessary in that connection are for his account, the War Department being chargeable for such damage as results directly from carrying its cargo or troops, and which is not chargeable to wear and tear. The War Department is also chargeable with reconditioning of alterations made for its convenience.

b. Under bare boat charter, the War Department mans the vessel and has use of all equipment and stores and full charge of their operation. In this case the owner is chargeable with wear and tear incident to the service contemplated under the charter, but the repairs necessary for maintenance and operation, accounts for articles of inventory and stores, and reconditioning of alterations are chargeable to the War Department.

SECTION VIII

OVERSEA SHIPPING, NORMAL OPERATIONS

	Paragraph
General-----	52
Authority for transportation-----	53
Accommodations-----	54
Assignment to quarters-----	55
Baggage-----	56
Transportation of casualties-----	57
Marking of supply shipments-----	58
Loading troop property, etc-----	59
Mail-----	60
Explosives and inflammables-----	61
Sailing instructions and orders-----	62
Passenger lists-----	63
Routine of passengers-----	64
Embarkation and debarkation of troops-----	65

52. General.—a. Whether in peace or war, handling military cargo is obviously a difficult task owing to diversity in classes and kinds of cargo that must be handled, and to the fact that almost every vessel has its individual peculiarities. These are principally due to alterations, changes, and improvements in their original construction. After ships are put in commission and make a few voyages changes are necessitated not only because of character of cargo that is to be carried but also to maintain stability of the vessel. Handling cargo for Army Transport Service is more difficult than handling cargo for shipment via commercial lines owing partially to nature of the cargo and partially to allocation of tonnage as pertains to the different arms and services. The following is the peacetime manner in which space on transports is allocated on a percentage basis to the different arms and services:

Arm or service	Percent
Quartermaster Corps.....	75.
Air Corps.....	10.
Ordnance Department.....	8. 30
Corps of Engineers.....	2. 25
Signal Corps.....	1. 60
Medical Department.....	1. 40
Chemical Welfare Service.....	. 25
Coast Artillery Corps.....	. 20
Miscellaneous.....	1. 00
	100.

b. In measuring tonnage of a vessel the net tonnage, that is, its capacity for passengers and freight, must always be taken into consideration. On Army transports cargo capacity is governed by the number of troops that will be carried. When no troops are carried approximately 5,000 cubic tons of cargo can be loaded on the U. S. A. T. *Chateau Thierry* and U. S. A. T. *St. Mihiel*; when troops are carried, approximately 1,800 cubic tons of cargo can be loaded.

c. Of the 75 percent of cargo space that is allocated the quartermaster corps under peacetime conditions, the following priorities in shipment must be followed:

(1) Household goods (within officer's baggage allowance) and impedimenta of troops.

(2) Private automobiles of officers, warrant officers, and noncommissioned officers of the first three grades; one automobile per officer or noncommissioned officer.

(3) Subsistence supplies.

(4) Clothing.

(5) Other Government cargo proportionately allotted to the supply arms and services.

(6) Officers' and noncommissioned officers' household goods in excess of their prescribed allowances.

(7) Private automobiles belonging to civilian employees of the War Department traveling under orders transported at prescribed rates of reimbursement. Private automobiles belonging to naval officers traveling via Army transport.

(8) Private automobiles of officers, warrant officers, and noncommissioned officers of the first three grades in excess of the allowance of one per officer or noncommissioned officer.

53. Authority for transportation.—Authority for transportation on Army transports of troops, casualties, and individuals sailing from domestic ports is issued by The Quartermaster General, and from foreign ports by the oversea commander concerned in accordance with a fixed schedule of priorities contained in Army Regulations. Schedule of sailing and the itinerary of each vessel in peacetime is published months in advance by The Quartermaster General.

54. Accommodations.—There are three classes of accommodations provided for aboard Army transports, namely, first, second, and troop. Personnel assigned to—

a. First class.—(1) All commissioned officers, Army nurses, warrant officers, cadets, and dependent members of their families.

(2) Civilian employees of the War Department and dependent members of their families.

(3) Members of Congress and dependent members of their families accompanying them.

(4) Personnel of the Navy, Marine Corps, Coast Guard, Public Health Service, and the Coast and Geodetic Survey will in general be assigned the same accommodations as the corresponding grades of the Army.

b. Second class.—All master, technical, first, and staff sergeants, and dependent members of their families. Also, maidservants when entitled to travel.

c. Troop class.—All enlisted men below the grade of staff sergeant, and menservants.

55. Assignment to quarters.—*a.* The officer in charge of the port—

(1) Assigns accommodations to all casualties; first, second, and troop class.

(2) Assigns space for prisoners suitable to their needs, safeguarding, and detention.

(3) Furnishes the commanding officer of troops and transport quartermaster or quartermaster agent each with two copies of the complete assignment list.

b. When an organization is ordered to a port for embarkation, the commanding officer of the organization or separate unit furnishes the officer in charge of the port not later than 24 hours before the command is due to embark a list in triplicate giving names of—

(1) Officers, warrant officers, cadets, and flying cadets, arranged according to grade.

(2) Noncommissioned officers of the first, second, and third grades, arranged according to grade.

(3) Enlisted men below third grade, alphabetically arranged, in each company or detachment.

c. Quarters are permanently assigned to the permanent commanding officer of troops, transport quartermaster, transport surgeon, quartermaster agent, and other permanent officers of the transport; and the quarters so assigned are not available for assignment to passengers.

56. Baggage.—*a. Peacetime allowance.*—In time of peace a suitable amount of baggage is authorized each passenger on a transport and must be delivered to the transport dock, charges prepaid.

b. Classification.—Baggage is divided into three classes:

(1) Baggage desired by passengers for use in stateroom.

(2) Personal baggage stored in the baggage room of the transport which is accessible to passengers at stated hours each day.

(3) Personal baggage stored in the hold of the transport which will not be accessible to passengers during the voyage.

57. Transportation of casuals.—*a. Casual officers travel as a detachment under command of the senior casual officer. All casual officers should be assembled on the pier upon debarkation and reported to the troop movement officer.*

b. Enlisted men are organized into companies and placed under command of an officer. The commanding officer of the casual depot at the port organizes casual enlisted men into companies which are handled as companies during the voyage. The companies are organized with reference to destination and when practicable such organizations should be organized to conform to the capacity of sleeping quarters of the several decks aboard a transport, which arrangement assists the officers in administering their companies.

58. Marking of supply shipments.—*a. Except hazardous ammunition and explosives, supplies consigned to Alaska, Puerto Rico, Panama Canal Zone, Hawaii, Philippine Islands, or elsewhere overseas are marked in care of the quartermaster supply officer of the port through which the shipment is to move, and the words FOR EXPORT will be conspicuously shown thereon. Such packages are also marked to show ultimate consignee and destination and capacity in cubic feet or decimals thereof.*

b. The foregoing requirements as to markings do not apply to shipments of sacked grain or baled hay or straw in carload lots for delivery to one consignee at one station.

59. Loading troop property, etc.—*a. General.*—Troop property, rations, forage, and ammunition, and all articles not indispensable in camp are loaded on transports under direction of the officer in

charge of the port as soon as may be convenient, with due regard to accessibility and the order in which the property will be required by troops on landing. Property and baggage of each company are kept separate as far as possible and not mixed with other stores. Any troop property to be left behind at the post or port is suitably packed, marked, and listed, and turned over to the port quartermaster or port supply officer.

b. Personnel.—Loading should be done by experienced riggers, longshoremen, and stevedores who are skilled in loading ships. The troops load only their own light baggage.

60. Mail.—*a.* The master is responsible for safe delivery of mail carried on an Army transport, his responsibility beginning when the mail is placed aboard the ship. Every care should be exercised in guarding the mail at all times to protect it from loss or from being rifled or tampered with. On Army transports manned by Navy personnel, in which case responsibility for the mail rests with the Navy officials, the commanding officer of troops furnishes and maintains a guard over the mail when requested to do so.

b. When it is desired by proper authority that official communications, confidential or otherwise, be turned over to an official of a transport for transmission, such communications should be intrusted to the care of the commanding officer of troops or to the master if there is no commanding officer of troops.

61. Explosives and inflammables.—*a. Definitions.*—(1) *Explosives.*—Any substances, solid or liquid, which under the influence of a disturbing agency enter into a chemical reaction resulting in formulation of gases and evolution of much heat. The word “explosives” whenever used in this manual should be understood to include—

(a) High explosives, which are those chemical compounds or mechanical mixtures in which change into gases under disturbing influences is instantaneous, at very high temperature, and may be produced by shock or by proper degree of heat. Examples are gun cotton, TNT, and fulminate of mercury.

(b) Low explosives, which are those chemical compounds in which change under heat into gases is very rapid, at high temperature, and may be produced by proper degree of heat. Example is black gun powder.

(c) All ammunition containing explosives, including smokeless powder.

(2) *Inflammables.*—Any substances, solid or liquid, easily set on fire and capable of rapid combustion. The word “inflammables” when-

ever used in this manual should be understood to include all inflammable solids and liquids such as loose cotton, shavings, trash, kerosene, gasoline, oily or greasy waste or rags, etc.

b. Passenger transport prohibitions.—Statutory enactments do not prevent transportation of military or naval forces with their accompanying munitions of war on passenger equipment vessels; however, existing Army Regulations prohibit transportation of explosives on passenger transports while carrying passengers, except small-arms ammunition. Small-arms ammunition in any quantity, safe acids and chemicals, and only such fuses, torpedoes, rockets, or other signal devices as may be essential for safe and proper navigation of the ship may be carried, but all small-arms ammunition, etc., must be indicated as such on the manifest and the master notified.

c. Shipment on cargo transports.—Under existing regulations the shipment of acceptable explosives, ammunition, gases, acids, and incendiary material on straight cargo transports is permitted when the officer in charge of the port and the master of the vessel have definite information that no passengers have been assigned thereto.

d. Classification of explosives.—(1) For transportation purposes explosives are classified as—

(a) Forbidden.

(b) Acceptable.

(2) A full classification of forbidden and acceptable explosives is set forth in AR 30-1270.

62. Sailing instructions and orders.—*a.* Prior to sailing of any transport from a terminal port the Superintendent, Army Transport Service, of the port must require of the master a certificate to the effect that in his opinion his ship is seaworthy, properly supplied and that he is satisfied with his crew. The master secures such certificates from his subordinates as he may deem necessary for his own protection and to assure himself that the deck, engine, and steward's departments are in proper condition for the ship to go to sea.

b. Under normal conditions The Quartermaster General issues sailing instructions for all ships, except that the chiefs of arms and services and the commanders of corps areas, departments, and expeditionary forces issue sailing instructions for ships which by competent orders have been assigned to and placed under their control.

c. Sailing instructions for ships under control of The Quartermaster General are sent to the commanding officer of the port who issues the necessary sailing orders in writing to the master of the ship.

63. Passenger lists.—*a.* Passenger lists are lists of troops and individuals departing for overseas, prepared on quartermaster forms for that purpose, and when prepared are distributed in accordance with current instructions contained in Army Regulations.

b. In the case of organizations or detachments traveling as such, the passenger list is prepared by the officers commanding them and presented to the commanding officer of the port of embarkation. In the case of passengers traveling as individuals, the passenger list is prepared by the port adjutant.

c. Names are numbered consecutively on each of the first and second class passenger lists, each list beginning with No. 1. On troop class passenger lists, names are numbered consecutively for each organization, each list beginning with No. 1. Names of officers on duty with organizations are included in the passenger list of first class passengers prepared at the office of the Superintendent, Army Transport Service. Their names are shown also on organization passenger lists in parentheses, but are not given a number. Names of individuals attached to an organization are shown in the proper places on the passenger list with the notation under remarks "attached." Names of individuals not on duty with or attached to an organization are shown in their proper places on the passenger list with a notation under remarks showing the purpose or occasion of their presence.

d. Colored troops are shown as such.

e. Entries are double-spaced, and must be absolutely accurate, clear, and legible.

64. Routine of passengers.—*a. Calls and drills.*—A list of calls, drills, or other forms of exercise is published by the commanding officer of troops.

b. Guard and prisoners.—(1) Guard duty on transports conforms to the general principles prescribed in manuals published by the War Department which prescribe duties for the officer of the day, officer of the guard, and sentinels. Special instructions covering fire alarms and "man overboard" must be understood by all members of the guard.

(2) Prisoners may be used for police purposes. They must not be permitted to have tobacco or matches in the prison cell.

c. Police and inspection.—Immediately after completion of embarkation, a suitable officer should be detailed as police officer, who has charge of the police of all parts of the ship occupied and used by troops. The police officer accompanies the military and civilian ship's staff during their daily inspection of the ship.

65. Embarkation and debarkation of troops.—*a. Embarkation.*—(1) In all cases of embarkation of troops on transports, an embarkation order when practicable is issued by proper authority designating as the commanding officer of troops for the voyage the officer properly chargeable with such duty under the provisions of the one hundred and twentieth article of war. In the absence of such order or when a line officer senior to the officer designated is subsequently on duty on the transport, the senior line officer will assume command of troops embarked and will be responsible for the discipline of his command. If another officer has been designated, instructions and papers delivered to him by the designating authority will be delivered to the officer assuming command. In the absence of specific orders from the President detaching officers of the Marine Corps for service with the Army, the one hundred and twentieth article of war does not authorize such officers to command troops of the Army, and such officers are neither assigned nor permitted by the commanding generals or other officers of the Army to command troops of the Army on Army transports or elsewhere.

(2) *Schedule and order.*—(a) The commanding officer of the port prepares the schedules for embarkation of troops and material and supplies on the transports after consultation with the commander of troops to be embarked.

(b) The commander of the troops issues an embarkation order based upon the schedules. The chief points to be considered in preparation of such an order are—

1. Date and hour of embarkation.
2. Detail of an officer to supervise the loading on each pier.
3. Detail of adequate guard to maintain order.
4. Disposition of guard at camp.
5. Routes by which troops will march to place of embarkation and rendezvous points for same.
6. Place where commanding officer of troops may be found during period of embarkation.

(c) When embarkation or debarkation in the face of opposition is anticipated, distribution and plan of embarkation or debarkation are made to suit tactical requirements of the situation, and in case of difference of opinion final decision rests with the commander of troops. When no opposition is expected, final decision rests with the officer in charge of the port.

(d) Except in cases in which the commanding officer of troops may deem necessary, no small-arms ammunition will be in the possession

of individual enlisted men on board a transport, and all such ammunition will be carried in bulk with the organization baggage.

(3) *Proceeding aboard transport.*—(a) At the prescribed hour the troops are marched to the piers where inspection and necessary checks are made. The first relief of the guard for the transport is then marched on board and posted. Animals, guns, carriages, and other organization property are turned over to loading details (par. 59b), and the command is then marched on board by organizations in a quiet and orderly manner, and each company is conducted to its assigned quarters by an officer of the command.

(b) In time of war no person, except members of necessary working details under command of an officer, is allowed to go ashore after having once gone aboard. Any information desired by any person after embarkation regarding baggage, etc., is secured from the proper port representative aboard ship.

(4) *Notice to go ashore.*—In order to give ample notice to go ashore to any persons aboard the vessel who are not to sail on it, one long blast of the whistle is sounded $\frac{1}{2}$ hour before sailing, two blasts 15 minutes before sailing, and three blasts 5 minutes before sailing.

(5) *Stowaways.*—The commanding officers of troops and all officials concerned should take the necessary precautions to prevent unauthorized persons from boarding transports. Any stowaways found after sailing should be put to work about the ship, and upon arrival at destination they are reported to the debarkation authorities who obtain instructions from the proper immigration officials as to further disposition. Proper record concerning stowaways or workaways must be entered in the ship's log.

(6) *Visits of courtesy.*—(a) All officers sent in advance of their commands to arrange for embarkation on ships manned by the Navy must call upon the commanding officer of the ship at the first opportunity and, if practicable, at the same time. When embarkation is to be on a commercial ship, the commanding officer of troops must call on the captain of the ship at the first opportunity and must cooperate fully in carrying out all the ship's regulations.

(b) On transports manned by the quartermaster corps, the commanding officer of troops within the 24 hours preceding embarkation must pay a visit of courtesy to the master of the ship. If impracticable to do this before embarkation for any sufficient reason, it must be done as soon as practicable after embarkation. The master of the ship returns the visit within 12 hours after the commanding officer of troops embarks.

(c) The commanding officer of troops assigned to naval transports must pay a visit of courtesy to the commanding officer of the ship at the earliest moment practicable, and at this time receives any instructions the naval commander may wish to give relative to guards, police details, mess details, etc.

b. Debarkation.—(1) Before arrival of a transport at its destination, the commanding officer of troops issues necessary debarkation instructions, calling a conference of organization commanders and others concerned, if necessary.

(2) Before reaching port the commanding officer of troops details from each company, troop, etc., one man who is designated as "marker." The marker carries his company guidon or other distinguishing mark. Before troops disembark these markers are stationed on the piers where the organizations are to assemble. After assembly and roll call on the piers, the men must not be permitted to straggle. From this point troops are marched to transportation conveyances or to camp.

(3) Attention of commanding officers of troops should be invited to the instability of troop transports when a large number of troops are crowded on the upper deck. In order that necessary steps may be taken to prevent possible disaster, the day before the ship docks the commanding officer of troops should consult the master of the ship with a view to receiving such instructions as the master may desire to give with reference to sending troops below decks.

(4) *Miscellaneous.*—(a) Unless circumstances are exceptional, troops arriving on board a ship which is to dock after 6 PM should not be permitted to debark until the following day.

(b) The military staff will assemble at the office of the commanding officer of troops as soon as the ship drops anchor or docks to receive the debarkation officers.

(c) As a rule troops leave the ship by organization or detachment, the order of departure being the inverse order of embarkation.

(d) Men who have been debarked, except members of authorized details, are not permitted to return to the ship.

(e) When the transport is unable to come alongside a wharf, troops are landed in small boats towed by launches or by means of tugs or lighters. The same general method of procedure is followed as at a wharf, an advance guard being first landed, followed by the men with their arms and equipment, except that men who are detailed for fatigue duty on board do not leave the ship with their organizations or detachments. Great care must be exercised to avoid overcrowding small boats, and the men must be cautioned to remain seated and quiet. When

there is no wharf, each ship's boat is manned by men of the crew to row and beach the boat after it is released by the launch.

(f) Cooperation with immigration and other officials at ports touched by transports as well as at terminal ports by all officers and employees of the Army Transport Service is strictly required.

SECTION IX

EXPEDITIONARY FORCES, MOVEMENT OF TROOPS, EQUIPMENT, AND SUPPLIES

	Paragraph
Tasks of Army and Navy forces in joint operations.....	66
Transportation in connection with mobilization.....	67
Quartermaster General Protective Mobilization Plan.....	68
Wartime ports of embarkation and debarkation.....	69
Baggage, wartime allowance and classification.....	70
Loading ship.....	71
Method of shipping equipment.....	72
Secrecy of troop movements.....	73

66. Tasks of Army and Navy forces in joint operation.—For normal Army tasks in joint oversea movements see Joint Action of Army and Navy.

67. Transportation in connection with mobilization.—*a. General.*—(1) Transportation in connection with mobilization involves shipment of individuals, troops, and supplies by land, air, and water within the zone of the interior. Means of transportation include rail, water, motor, air, and animal transport. Where no terminal congestion or shortage of transportation exists or impends, troops and supplies will be shipped along the usual lines of traffic with the least possible interference with established practice.

(2) *Priorities.*—Priorities as between military and commercial traffic will be announced by the War Department. It may be expected that military traffic ordinarily will take precedence.

(3) *Shipments to ports.*—Carload shipments consigned to or via a port of embarkation will be dispatched into the port area only on authority of the port commander.

(4) *Troop movement data.*—Movement data will be prepared and kept up to date by corps area commanders for all units in their areas. These data will include organizations with Tables of Organization numbers; strength in officers, enlisted men, and animals; entraining points; rail equipment requirements and number of trains; weight in tons and volume (cubic measurement) of equipment and supplies normally to accompany each unit. Similar movement data

will be prepared and kept up to date by The Quartermaster General for all type units, peace and war strength, to be mobilized. These movement data will cover both rail and water transportation requirements.

(5) *Coastwise and inland waterway shipping.*—Use of coastwise and inland waterway shipping in connection with shipment of troops and supplies incident to mobilization will depend upon the military situation and upon the locations of points of origin and destination of the shipments contemplated. Coastwise shipments may be accomplished through use of Government vessels such as harbor boats, and through use of merchant ships. For short distances, port-to-port shipments may be completed almost as promptly by water as by rail. Coastwise shipments for long distances ordinarily will not be made where speed of delivery is a major factor.

b. Protective Mobilization Plan.—(1) *General.*—The 1939 War Department Protective Mobilization Plan provides for mobilization of a moderate, balanced force for the defense of United States territory. It provides initially—

(a) A force of moderate size progressively available for operations in the field beginning on M-day.

(b) Harbor defense troops.

(c) Reinforcements for oversea garrisons.

(d) Certain other troops either for use as cadres to expedite the mobilization of additional forces or, if necessary, for immediate use.

(e) Installations necessary for mobilization and maintenance of the troops to be mobilized.

(2) *Depots at ports of embarkation.*—(a) On mobilization, existing general depots located at ports of embarkation will continue to operate as such until 60 M. The Logistics Annex of each strategical plan will specify whether existing depots are to be eliminated from either or both of the existing ports after 60 M, or are to be continued thereafter to meet the requirements of the particular situation.

(b) Supplies received at a port of embarkation will be for current use or transshipment. Ports of embarkation will be operated essentially as relay points. Depot systems of accounting and warehousing will not be employed thereat. Servicing, shop, laboratory, or salvage operations at a port will be limited to the minimum necessary for efficient operation of the port itself as distinguished from supplies for or from overseas. When projected shipments from the port of supplies already en route thereto cannot be made, such supplies where possible will be delayed at intermediate points or depots within 6

or 12 hours' distance by rail from the port. Port commanders should plan to use port facilities for transit purposes only.

(c) Supply of the permanent garrison of a port of embarkation and issue of such Class I supplies only to transient troops as may be necessary from time to time are a responsibility of the port commander and will be accomplished in the manner prescribed for exempted posts or stations.

(d) Each supply arm or service representative on the staff of port of embarkation commanders will be assisted by the minimum administrative and technical personnel to supervise receipt, care, and loading of the category of supply for which the supply arm or service is responsible.

68. Quartermaster General protective mobilization plan.—

a. General.—The 1939 plan provides for the orderly expansion of peacetime activities under control of The Quartermaster General to meet the mobilization requirements of the War Department Mobilization Plan by—

(1) Procurement, storage, and distribution of quartermaster supplies.

(2) Transportation by land, water (including inland waterways), and commercial air transport, except rail transportation, in the theater of operations.

(3) Construction and maintenance of shelter and facilities in the zone of the interior other than fortifications.

(4) Acquisition of real estate, graves registration, operation of laundries and bakeries, field printing, salvage, reclamation, and such other quartermaster services as may be designated by the Secretary of war.

b. Transition steps.—Peacetime organization and supply procedure of the quartermaster comps will continue on and after M-day, except for certain changes provided for in the plan. Major steps to be taken in transition from peacetime organization to mobilization organization are gradual—

(1) Expansion of existing installations and agencies.

(2) Establishment of additional installations and agencies.

(3) Decentralization.

c. Water transportation.—The Quartermaster General will—

(1) Provide and maintain all vessels required by the War Department, except those required for river, harbor, and fortification work under the Chief of Engineers, and as may be specified in special plans.

(2) Control operation and maintenance of the Army Transport Service and the Harbor Boat Service.

(3) Coordinate with port commanders the transportation of troops and supplies into and through ports of embarkation and debarkation.

(4) Coordinate military traffic on coastwise and inland waterway commercial transportation.

d. Ports of embarkation.—Quartermaster sections of general depots at ports of embarkation will be evacuated by 60 M in the manner specified in the War Department Mobilization Plan. Port of embarkation commanders will control flow of supplies through their respective ports.

69. Wartime ports of embarkation and debarkation.—*a. General.*—Where ports of embarkation or debarkation have been established in time of war the transportation service at such ports will be under immediate supervision of the port commander. At ports placed under jurisdiction of the commander of a department or an expeditionary force, the port commander reports to such commander. Personnel and assignment of duties at a port of embarkation or debarkation in time of war will be prescribed for a primary port described in paragraph 9 with additions and modifications given in *b* to *d* below.

b. Port commander.—(1) The port commander will be responsible for and will have authority over all activities at the port, including concentration camps and animal depots connected therewith when established; reception, supply, transportation, embarkation, and debarkation of troops, and receipt, storage, and transportation of supplies. He will see that ships furnished him are properly fitted out for the purpose for which they are intended; will supervise operation and maintenance of military traffic between his port and the oversea base or bases through the Superintendent, Army Transport Service, who will be a member of his staff; and will command all administrative groups assigned to the port and be responsible for efficient and economical direction of their operations.

(2) The military staff of a port commander in peace or war will consist of such staff officers as may be approved by the War Department.

c. Port quartermaster.—The port quartermaster will be responsible under jurisdiction of the commander of the port for all activities of the port pertaining to the Quartermaster Corps, excepting the Army Transport Service, and the quartermaster supply section of the port depot. In general, duties of the port quartermaster will

WATER TRANSPORTATION

include responsibility for quartermaster activities common to all sections of the port depot.

d. Superintendent, Army Transport Service.—The Superintendent, Army Transport Service, will be responsible under jurisdiction of the port commander for proper administration of all Army transport matters in accordance with orders and regulations issued by the War Department, including operation and maintenance of all means of water transportation.

e. Tables of Organization.—(1) Table of Organization No. 10-260-1, for a port headquarters for mobilization only gives only headquarters overhead for a port of embarkation and debarkation. It provides the military overhead required to administer a port designed to handle the following approximate load:

	Per month	Maximum any one time	Capable of expansion to handle per month
Personnel.....	50, 000	20, 000	100, 000
Animals.....	1, 000	1, 000	2, 000
Supplies and equipment (ship tons).....	300, 000	200, 000	350, 000

(2) While the table specifies military personnel only, there are no restrictions in the employment of a reasonable number of civilian personnel required from time to time to augment the permanent personnel. All personnel, however, should be held to the minimum required.

(3) Table of Organization No. 10-265 covers the war organization for a port company with a strength of 4 officers and 215 enlisted men. Each company has a war capacity of 1,500 ship tons and 150 animals. The port battalion consists of 4 companies with a strength of 19 officers and 870 enlisted men. The war capacity will be exactly four times that of the port company. This organization is for employment at ports of embarkation or debarkation outside the continental limits of the United States only. Sufficient stevedore and similar port and dock labor is provided to handle as a battalion approximately 6,000 ship tons daily, or 180,000 ship tons per month. This type of labor required at domestic ports will be continued as at present; that is, civilians employed when and in the numbers required.

70. Baggage, wartime allowance and classification.—*a.* In time of war, baggage allowance on transports will be as listed below and no variation will be permitted, except upon special authority from the War Department.

(1) For general officers so much of their field allowance of baggage as they may find necessary.

(2) For officers below the grade of general officer, for Army nurses, for warrant officers, and for contract surgeons, one bedding roll, weight not to exceed 50 pounds, one piece of hand baggage or clothing roll, weight not to exceed 40 pounds, and one trunk locker of the approximate dimensions 31½ inches by 18 inches by 13½ inches, or other similar containers of the dimensions required to accommodate the particular type of baggage necessary for the particular duty on which the officer is engaged, provided that the total weight of baggage, including hand baggage, does not exceed 175 pounds.

(3) For civilian employees who are furnished first class transportation on Army transports, one bedding roll and one piece of hand baggage as prescribed in (2) above.

(4) Clothing and equipment in the personal possession of passengers of the troop class will be limited to arms and equipment which the soldier carries on his person in the field, with only such additional articles of clothing as may be required in existing orders or are absolutely essential for use of the soldier during the voyage. Commanding officers responsible for preparation of organizations or casual detachments for oversea voyages will issue necessary orders to carry out provisions of these instructions, prescribing articles of equipment and clothing to be taken by men into troop quarters and requiring all surplus personal baggage of troop class passengers to be delivered at the transport in suitable condition for storage in the hold during the voyage.

(5) For civilians authorized to accompany the Army such as special agents of the Government, newspaper correspondents, and representatives of welfare organizations, or other persons issued first class transportation and not covered in (1), (2), and (3), above, the type and amount of baggage prescribed in (2) above.

(6) For civilian employees and other persons issued other than first class transportation, one piece of hand baggage or clothing roll, weight not to exceed 50 pounds.

b. Wartime allowance of baggage is divided into two classes:

(1) Light, which consists of hand baggage and other containers permitted in staterooms, and packs carried on the person by enlisted men.

(2) Heavy, which consists of all other baggage of passengers and which is placed in the hold of the transport and not accessible to passengers during the voyage.

c. In order to facilitate loading aboard ship, troop baggage forwarded to a port to be placed in the hold should be loaded on cars so as to be separate from all other baggage.

71. Loading ship.—*a. Maximum.*—Commercial loading utilizes to the maximum the ship space and does not contemplate tactical employment of the troops on landing until their equipment, other than personal equipment, has been issued to them. This method of loading is applicable to movements from an established port to an established and well-secured port. Troops moved by this method are not available for tactical employment in landing operations against hostile forces. In the interest of economical administration, ships should be loaded to their maximum capacity whenever practicable.

b. Unit.—The unit loading method gives primary consideration to availability of troops for combat purposes on landing rather than utilization of ship space. Degree of readiness for employment depends upon degree to which organizations are unit-loaded as follows:

(1) *Combat*, in which certain units selected because of their probable destination and employment in landing on hostile shores are completely loaded on one ship with at least their essential combat equipment and supplies immediately available for debarkation with the troops, together with the animals or other transport for the organization when this is practicable. This method of unit loading is particularly applicable to units which probably will be required for an assault on hostile shores by a landing from small boats. Such an operation against any one beach will require an Army combat team. This of course is subject to modification to meet special requirements. Combat teams will be loaded in such manner as to permit simultaneous debarkation.

(2) *Organizational*, in which organizations with their equipment and supplies are loaded on the same transport, but not so loaded as to allow debarkation of troops and their equipment simultaneously. This is somewhat more economical in ship capacity than is combat unit loading. It permits debarkation of complete units available for employment as soon as the troops and their equipment have been assembled on land. Like combat unit loading, this method permits diversion en route by complete ship loads from the destination originally intended.

(3) *Convoy*, in which the troops with their equipment and supplies are loaded on transports of the same convoy, but not necessarily on the same transport. This allows a more complete utilization of ship space, particularly by using this method of loading to fill in space on transports carrying combat unit loaded organizations. Troops which are convoy unit loaded are available for tactical employment only when landed at established beachheads, and then only after the lapse of time necessary to assemble them on land with their equipment and supplies.

72. Method of shipping equipment.—*a.* Troop baggage is carefully boxed or otherwise secured for transportation, and plainly marked with the name of the organization on as many sides of the packages as practicable. Articles of unusual size and weight such as large guns and trucks of special size are reported in advance in order that proper arrangement for loading may be made.

b. Preparation of motor vehicles for water shipment is accomplished by military personnel. Loading and securing is accomplished by ship personnel. After loading, movement of vehicles into position on board should be done by the regular drivers under the vehicles' own power. Because of the dovetailing of duties of the ship's crew and military personnel, close coordination is essential. The vehicles should be so stowed as to permit frequent inspection, especially during rough weather, to insure that the blocking and lashing are holding, and for the further reason that special attention must be given to rust prevention during water shipment.

c. Animals are sent on separate ships when not required immediately upon debarkation of the troops. In such cases animals are sent to the port of embarkation in solid stock trains and as a rule shipped in stock ships.

d. Explosives and other dangerous or inflammable articles must be marked plainly as such, sent to the port of embarkation in separate cars, and loaded in separate compartments in accordance with special rules.

73. Secrecy of troop movements.—The regulations given below apply only in time of war.

a. Officers and men will avoid talk or discussion of military matters while in any public place and will view with suspicion any person asking questions about military subjects or discussing such topics where there is even a remote possibility that the information may reach the enemy.

b. All persons connected with the military service who receive information of proposed inland or oversea movements of organizations,

detachments, or individuals are forbidden to make public the details of such movements.

c. Names of organizations, ports of embarkation, or ships to be used in troop movements, or date of departure, arrival, or embarkation will not be disclosed. When it is necessary to advise relatives or other civilians of approaching departure, persons connected with the military service will not convey any information in regard to rail routing, probable time and date of departure from or arrival at any station, names of ships, ports of embarkation, or the destination of organizations.

d. Commanding officers are responsible that their commands are instructed in the provisions of this paragraph and in the dangers involved in leakage of information concerning troop movements.

e. All persons not on official business will be excluded from the piers at all times. Only official photographers will be permitted to take cameras within the limits of the pier or overseas. Arrangements will be made to have farewells completed before arrival at the piers.

f. At ports of embarkation troop movements will be made insofar as practicable without attracting undue attention. Troops will be held at ease, bands will not play, colors will be cased, and no noise of any kind will be permitted.

g. In harbors, vessels loaded with troops or supplies will be moved under cover of darkness whenever possible. If vessels must be moved during daylight, the commanding officer of troops will hold his men below deck or within deck superstructures to prevent attracting attention. Signals by flags or whistles will be limited to those necessary for safe navigation.

h. After arrival overseas no information will be given concerning names or destinations of organizations, names of vessels, data concerning convoys, routes pursued, measures taken to avoid attack, dates of arrival, debarkation, or departure, or number of troops or kind of cargoes carried.

SECTION X

TRANSPORTATION OF ANIMALS

	Paragraph
General.....	74
Port remount officer.....	75
Transports.....	76
Animals.....	77
Routine duties on animal transport.....	78
Dogs and cats.....	79

74. General.—The general regulations contained in this section relating to the shipment of animals by water serve only as a guide.

Whether in peace or war, certain basic principles set forth herein obtain. At present, the Army ships its replacement animals to oversea possessions, for example, Canal Zone, Hawaii, and the Philippines, several times each year. Few if any ever return to the United States. In isolated cases private mounts of officers are returned from foreign possessions. One Army transport, the U. S. A. T. *Meigs*, is equipped for animal service. In the event of an emergency, which would warrant the shipment of animals in connection with expeditionary forces, it would probably devolve upon the Quartermaster Corps to charter suitable ships and convert them into animal transports. Such conversions would involve the construction of stalls, special ramps, and other special appliances to accommodate the animals. The time involved would vary from 3 to 7 days, depending on availability of suitable ships. In general, unless an organization accompanies a shipment of its own animals, it turns into the remount depot at its station all of its animals and draws new animals from the remount service, Quartermaster Corps, after arrival overseas. However, if it is desired to reissue to any organization its own animals after arrival overseas and the organization does not accompany the animals, the supply company or a detachment of the organization, with a sufficient number of men attached to furnish one man to every ten animals, must be left to care for animals in the stables or animal shelters at the station of the organization until such time as the animals can be sent to an embarkation depot. The supply company or detachment with attached personnel accompany and care for the animals while en route to an embarkation depot, while at the embarkation remount depot, and while on board ship en route overseas.

75. Port remount officer.—*a. Designation.*—At each port of embarkation for animals, there is one remount officer designated as port remount officer, with such assistants as may be necessary. This officer generally is the commanding officer at the embarkation remount depot at that port. He reports directly to the port commander and acts as his advisor in all matters pertaining to shipment of animals. He supervises and directs the remount service of the port and of all animal transports.

b. Responsibilities.—The port remount officer accompanied by the port veterinarian inspects animal transports upon arrival in port, the day before sailing, and makes a final inspection after the animals have been loaded and immediately before sailing of the vessel. Reports of the inspections are rendered to the port commander and include matters relating to ventilation, adequacy of water supply and cleanli-

ness of storage tanks; a statement whether specifications for refitting the ship have been carried out and whether the ship is in all respects ready for sea.

76. Transports.—*a. Equipment.*—Transports carrying animals should be equipped with the following for each 100 animals:

6 stable brooms.	6 manure baskets.
6 stable forks.	4 hoes.
6 buckets.	4 brooms.
4 shovels, short handle.	200 hay nets.

b. Type of vessel.—For transportation of animals by sea, the transport service should be equipped with large steamers provided with bilge keels. Interior fitting should be of the most substantial character; construction and arrangement of the stalls should be in accordance with approved plans on file in the office of the Quartermaster General. Detailed surveys of all suitable ocean shipping of United States registry are on file in the War and Navy Departments.

c. Personnel.—(1) *Commissioned.*—On each transport there should be assigned one officer of the remount service as transport remount officer, and one veterinary officer of the medical corps as transport veterinarian. When the number of animals exceeds 1,200, an additional veterinary officer as assistant to the transport veterinarian may be assigned.

(2) *Enlisted attendants.*—(a) *Quartermaster Corps.*—1 senior non-commissioned officer, Quartermaster Corps, as first sergeant; 1 non-commissioned officer, Quartermaster Corps, as forage master; 1 cook for each 20 attendants; 1 noncommissioned officer and 13 privates of the remount service for each 100 animals.

(b) *Medical Department, Veterinary Corps.*—One staff sergeant, one private or private, first class, for each 100 animals, and one additional noncommissioned officer to each four privates, or privates, first class.

(3) *Permanent assignment.*—This personnel should, as far as possible, be permanent as long as the transport to which it is assigned is employed for shipment of animals.

(4) *Duties.*—(a) *Transport remount officer.*—Under direction of the port remount officer, the transport remount officer has direct charge of the loading of animals on his transport. He has charge of all animal attendants on board and assigns officers and men to appropriate duties. He has direct charge of all animals on board. When additional personnel are necessary for care of animals, he makes a request for them to the commanding officer of troops aboard the

transport. Upon return from each trip, he makes a written report to the port commander through the port remount officer covering details of the voyage.

(b) *Transport veterinarian*.—The transport veterinarian has charge of all veterinary attendants. He is responsible for proper care of all sick and injured animals, and economical use of all veterinary supplies and equipment. He is constantly present during the loading of the transport. On arrival at the home port he takes prompt steps to renew supplies and repair or replace equipment to the end that both may be adequate and serviceable at all times.

77. Animals.—*a. General.*—As far as military requirements permit no animal should be shipped without having been held at least 2 weeks in an embarkation remount depot. The shipment to an embarkation remount depot for transportation overseas of sick or unserviceable animals is prohibited. When ordered to send animals to a port of embarkation the commanding officer of the organization to which the animals are issued or assigned submits all sick and unserviceable animals to the action of an inspector, who recommends that such animals as he finds unfit for shipment to a port of embarkation be turned in to the nearest remount depot to be disposed of by the responsible officer in accordance with existing policies. Before shipment, manes of all public animals are roached and animals to be shipped to the Tropics should be clipped. Animals are freshly shod in front only with smooth shoes unless intended for immediate use after debarkation, when they may be shod smooth all around.

b. Loading.—The three methods by which animals may be loaded, depending upon condition, type of vessel, and pier and wharf facilities, are—

(1) Ramp, which is a specially constructed, portable bridge equipped with railings and floor cleats. This method permits the animals to be led aboard in single file by the attendant. When in use flooring of the ramp should be covered with a heavy coating of either sawdust, cinders, sand, or other suitable litter. This method cannot be employed when decks of transports are too high or low compared with the level of the pier or wharf.

(2) Flying stall, which is constructed on the order of a large substantial crate in which individual animals are placed and hoisted aboard by the ship's tackle. This method is slow but can always be employed regardless of tide conditions.

(3) Sling, which is constructed on the order of a heavy canvas girth and placed around the animal's belly, to which the ship's tackle is attached, and the animal is hoisted aboard similar to cargo.

c. Debarkation.—All of these methods may be employed in debarkation, and in addition when conditions are favorable, animals may be landed by swimming, by being forced into the water. The swimming method when feasible is safer and quicker. This involves construction of a gangplank 16 feet long, with cross pieces nailed on the under side, which is poised on the edge of the port. The animal is led to the port, a light rope is tossed up from a boat below and passed through the halter ring; the animal, after being led onto the gangplank, is forced into the water by lifting up the interior end of the plank; when he begins to swim, he is pulled up close to the boat, care being taken not to hold his head too high for swimming. At the beach the rope is given to a man who wades out from shore and takes charge of the animal.

78. Routine duties on animal transport.—*a. General.*—The ship is divided into sections to each of which a noncommissioned officer with a squad is assigned. Stalls are numbered and the limits of the sections accurately defined so that each noncommissioned officer knows exactly for what animals and space he is responsible. The noncommissioned officer in charge of the squad makes his own details, keeps a forage record, and notes on the bulletin board the names of the men on guard and the number of horses sick.

b. Ventilation.—Adequate ventilation is most important. This is effected through hatchways, portholes, permanent air funnels, iron wind scoops, canvas wind sails, and below the water line by electric fans or blowing machines.

c. Feeding.—No hard and fast rules about feeding on board ship can be prescribed. The following serves only as a guide;

- (1) Feed no oats for the first 2 days.
- (2) For the next 2 days feed about 2 pounds of oats and 1 pound of bran per day to each animal.
- (3) Thereafter increase to, but do not exceed, 3 pounds of oats daily and 1 pound of bran.
- (4) Bran mashes and hay may be given freely throughout the voyage.
- (5) Not to exceed $\frac{1}{3}$ pound of linseed meal should be fed each animal daily. This may be fed dry as a mash. The greater the heat that is encountered, the more should the oats be cut down and a greater reliance placed on hay and bran. The consequences of overfeeding with oats on board ship are disastrous, as digestive disarrangements are certain to follow.

d. Watering.—An allowance of not less than 10 gallons per day per animal for each day of the voyage of pure drinking water must be

provided. Animals should be watered not less than four times a day; before being fed in the morning, at noon, before feeding in the afternoon, and again about 8 o'clock in the evening.

e. Grooming and exercise.—This should be carried on wherever and whenever possible. Every animal should be taken out of his stall and exercised for a few minutes each day and moved about before being groomed. Hand rubbing the legs helps to offset the lack of exercise.

f. Bathing.—Use hose pipe with sea water twice daily when possible for all animals suffering from heat. This lessens sweating, conserves condition, and purifies the atmosphere.

g. Sick.—Not less than 5 percent of the stalls on each deck near the hatchway will be reserved for sick animals. The sooner a sick animal is detected and removed to an airy upper deck the better will be the chances of recovery and the less the spread of infection. Ordinarily, no attempt should be made to treat hopeless cases, as it is contrary to hygienic doctrines and may lead to infection of neighboring animals.

h. Foothold.—To insure a satisfactory foothold, ashes should be sprinkled freely on platforms in rough weather and along alleyways whenever an animal must be moved.

79. Dogs and cats.—Carrying dogs and cats upon passenger transports is not permissible. Dogs and cats belonging to officers, Army nurses, warrant officers, noncommissioned officers of the first four grades, or civilian employees of the War Department may be carried on animal or cargo transports. The owner must make arrangements satisfactory to the officer in charge of the port of embarkation for care and other necessary expense of the animal while on the ship.

SECTION XI

MISCELLANEOUS

	Paragraph
General.....	80
United States Army bases.....	81
Merchant marine.....	82
General average contribution.....	83
Factors influencing good steamship management.....	84
Tonnage data.....	85

80. General.—The preceding sections of this manual relate specifically to the operation of the Army Transport Service from a purely military standpoint. As the shipping industry calls for personnel of wide diversification of training, this section is devoted

to general observations of various factors which would have to be considered should an emergency arise.

81. United States Army bases.—The most ambitious terminal-warehouse construction on record was carried out by the United States Army during the World War. A series of ocean terminals was erected at a total cost of more than \$150,000,000. They were located at Boston, Brooklyn, Newark, Philadelphia, Norfolk, Charleston, and New Orleans. At the time these bases were projected the question of permanent versus emergency construction was under discussion, and the idea of those in charge was that with American ports at that time backward in modern terminal equipment, these bases for a small additional cost of permanent construction could become a permanent addition to the Nation's port facilities. This policy was followed to the great advantage of American foreign trade and shipping. Their construction represented the first attempt in America at truly modern port terminal facilities. Their construction is unlike in many respects. They were intended as great practical laboratories in which to work out through usage under operation conditions better methods of lay-out, construction, and operation. There can be no question that the existence of these large and permanent terminals are today a valuable national asset.

82. Merchant marine.—Obviously, when it becomes necessary to augment the fleet of the Army Transport Service, it must be done through the merchant marine. The following material pertinent to the subject of water transportation is extracted from an article published in the November-December, 1939, issue of the Quartermaster Review.

The outstanding lesson of the last war in Europe was that we could not depend on foreign shipping to serve our commerce when demands of war necessitated the withdrawal of the merchant vessels of the belligerents from normal service. * * * However, with the establishment of the Maritime Commission under the terms of the Merchant Marine Act of 1936 things began to move in a new direction. One of the first acts of the commission was an investigation of our needs in new ships and the determination of long-term replacement program. * * * When we had determined the potentialities of new building, a program of 500 ships in 10 years was formulated. At first we believed we should be able to absorb not more than 50 ships a year, but the present emergency has sped up our building so that we have, up to November 15 (1939), contracted for 141 ships in less than 2 years. * * * The first and most important ship of the program to be contracted for was the *America*, the largest merchant ship ever built in the United States. * * *

The *America* will be adaptable as an auxiliary in time of war and her speed is adequate to enable her to maintain a reasonably rapid schedule in the

trans-Atlantic trade. * * * Perhaps our greatest need in ships was in the dry cargo category. No ship of this type had been built for about 18 years. Consequently, a large portion of our new building program is made up of relatively fast freight vessels. One hundred and fourteen have thus far been contracted for * * * (These will have a speed ranging from $14\frac{1}{2}$ to $16\frac{1}{2}$ knots.) Certain of the new cargo ships will have accommodations for passengers within the limit set by law while others will be strictly freight carriers. * * * We have not been neglectful of the intermediate class, that of combined cargo and passenger ships, and so we find three of these under construction for * * *, and eleven for the Maritime Commission under a modified C3 design. At least seven of the latter, all steam propelled, will be assigned to the round-the-world service of the American President Lines, well known to officers of the Army. These vessels, with accommodations for about 96 passengers, would make ideal small transports in time of emergency and their designs are based on their potential usefulness as military and naval auxiliaries. Finally, * * * twelve exceedingly fast oil tankers were contracted for private account and to indicate their ready adaptability to naval requirements, three have already been purchased by the Navy and will shortly become a part of the fleet's base force. So far as we know from reliable reports, these vessels are the fastest tankers ever built having attained speeds of over 19 knots on their trials. * * * Other national defense features were also required to be embodied in the vessels so that they could be converted to naval use without delay should their services be needed to augment the existing naval tankers * * *.

The vessels which we have designed are superior in speed and efficiency to any previously laid down in American shipyards. Almost every type of propulsion is included and advantage taken of progress in hull forms, cargo handling, and the thousand and one details which must be considered in the planning of any vessel. * * *

Our present policy does not contemplate the sending of large forces overseas but the possibility of such an operation must not be lost sight of.

Naval needs in shipping are apt to overshadow the requirements of other armed forces, but when the broader aspects of overseas warfare are considered it will be found that the demands for shipping to transport Army personnel and supplies may almost exceed those of the Navy. The Marine Commission has found that technical military purposes would immediately require 1,000 operating ships. The military establishments would take over practically every one of our ships now operating in foreign trade and 600 of those in the coastwise trade. This undoubtedly is why the Commission in its study of our shipping requirements said that "Even more important, perhaps, than its role in the development of commerce is the vital relationship that exists between the merchant marine and the national defense. It is obvious that national defense is an important, if not the primary, justification for the maintenance of American vessels in foreign trade."

Many types of ships may be required by the armed forces in their overseas movements. High speed vessels, usually combination passenger and cargo ships, may be converted into airplane carriers or used as auxiliary cruisers. A minimum of 20 of this type should be available in our merchant fleet. Slightly slower ships but of at least $16\frac{1}{2}$ knots and capable of carrying a minimum of 2,000 men and equipment would be required as transports and similar vessels could be converted to hospital ships and tenders of various classes. At present there are not sufficient

WATER TRANSPORTATION

vessels of this type available and our building program is intended to help in remedying this deficiency. At least 20 fast tankers must be available if the Navy is to be operated at its maximum efficiency. Many hundreds of slower ships for all purposes will be required in addition but speed seems a primary requisite for every vessel intended for direct operation by the armed forces. Gradual building of faster ships for general operation will eventually permit us to increase the speed of future convoys thus reducing, by virtue of more rapid turn-around, the number of ships required. * * *

83. General average contribution.—*a. General.*—In maritime law, general average is a contribution by the several interests engaged in a maritime adventure to make good the loss of one of them for voluntary sacrifices of part of the ship or cargo to save the residue of the property and/or the lives of those on board from an impending peril, or for extraordinary expenses necessarily incurred for the common benefit and safety of all the interests in the adventure. The right to contribution is based upon the principle that whatever is sacrificed for the common safety of the associated interests shall be made good by all the interests which were exposed to the common peril and were saved from the common danger by the sacrifice. The obligation to contribute in general average rests upon the vessel, the cargo, and the freight, and the owners of such interests (AR 30-960).

b. In Government shipments.—In order that the War Department may be protected in all shipments made for other Government departments and insular governments, the following statement will appear on each dock or shipping receipt issued as well as on ship's manifest covering this type of shipment: "It is agreed that in undertaking the water transportation of nonArmy cargo, the War Department is acting as a special or private carrier and not as a common carrier, and that neither the War Department nor the United States is to be liable for loss or damage to such cargo or any part of it occurring while in transit or in the custody of the War Department or of the United States and due to a peril of the sea, decay, or vice of the goods carried, accident, negligence of master, mariners, or officers, agents, or servants of the carrier, or due to any other cause whatsoever. Nor shall the War Department or the United States be obligated in any event to contribute in general average to make good any such cargo that may have been the subject to a sacrifice of a general average nature." (Cir. 1-12, Office of The Quartermaster General.)

84. Factors influencing good steamship management.—*a. Operation.*—In the operation of a water transportation system the principal factors encountered are cargoes, wharves, and ships. Good management may be shown in the operation of the ship as well as in its construction and design. Even if all forms of management afloat

and ashore be efficient, all this may be turned into a loss by lack of ability to handle freight quickly and expeditiously over the wharves at the terminals and by the lack of skill of the stevedores in stowing freight for the maximum yield for each voyage.

b. Types of carriers.—The nature of the cargo exerts a dominating influence on types of carrier and cargo transfer, handling, and stowage facilities.

(1) *Side port vessels.*—Side port transfer necessitates a horizontal movement for all deck loads. This class of vessel is composed principally of coastwise, lake and river vessels, and covered lighters; also some types of river barges.

(2) *Deck hatch vessels.*—These vessels employ both horizontal and vertical transfer systems.

(a) *Hatch vessels.*—Deck hatches characterize oceangoing vessels which are loaded vertically. The usual cargo carrier has four or more hatches. Cargo is hoisted vertically, swung sidewise across the deck, and lowered vertically. The entire operation of hatch loading and stowing is fundamentally different from that of side port loading.

(b) *All hatch vessels.*—Vessels are built for particular kinds of service. One of the most important types of cargo-carrying vessels is that developed on the Great Lakes in which the entire hull of the vessel, except a small section aft reserved for the boilers and engine, is one continuous hold divided by a few bulkheads. These vessels are built to carry all materials in bulk that can be handled by gravity chutes into the ship and by grab buckets or suction elevators out of the ship such as small, hard grain, coal, limestone, etc. Vessels of this type require special equipment for loading and unloading, and equipment and vessels are built to conform to a definite system. The question of stevedoring is therefore one almost entirely of mechanical appliances, the ideal toward which all water front operation strives.

(c) *Oceangoing colliers.*—In principle the typical collier or ore-carrying sea vessel is the same as the very efficient lake carrier, except that it carries its own handling machinery in order to discharge at any point directly overside into lighters, canal boats, or river barges.

(d) *Tank vessels.*—This is another development of the specially designed bulk cargo vessels. They carry their own pumping machinery to handle their cargoes. The principal cargo handled by tankers in bulk is crude and refined petroleum, gasoline, etc. They sometimes carry molasses, bean oil, and other similar liquids in bulk.

(e) *Refrigerator ships.*—Refrigerator ships may be especially built for the purpose from keel up, or they may be ordinary tramp or liner vessels fitted with refrigeration to carry meats, fresh vegetables, fruits,

and other perishable commodities. Refrigerated cargoes require special handling.

(f) *Container ships*.—It is inevitable that the future will bring to the shipping industry newer and more efficient methods of transportation. Whether new developments will lie in the hands of shipbuilders, in the direction of efficient hull and machinery design, or whether it will come from a new system of marine transportation, is still for the future to determine. The conception of a new marine transportation system is one in which shipping serves as a link in a complete scheme of transportation, including rail, truck, and ship, providing door-to-door service. A move in that direction, which possibly indicates a trend towards a new phase of marine transportation and one which in effect extends the service of land transportation facilities, is seen in the activities of the sea train lines. In the case of these vessels, the process of design was reversed, the type of cargo, namely, freight cars, was considered as the starting point, with the ship built around the cargo. The type of vessel used by these lines is a step in the direction of conforming ship transportation to the best and most economical practices of land. Further, the motor truck with its greater flexibility has become a powerful factor in the transportation problem, necessitating the development of a standard container which can be used by truck and by the railroad as a unit of cargo transportation. By the use of the sea trains, a carload of fruit, for example, from the West Coast may be brought by rail to New York, there loaded intact and delivered to the last station on the Cuban railway system. Those who expect ultimate duty in connection with water transportation should give some thought and attention from time to time to the development of more efficient and economical methods of coordinated shipments by motor, rail, and water.

c. *Wharf efficiency*.—It is possible to make substantial savings in port overhead expenses for each day eliminated from the time spent in port and also that wharf charges can be somewhat reduced for each day eliminated. When a ship is tied up for loading or discharging or for repairs or other purposes, it represents a liability. Profits come from quick turn-round. In case of emergency when time is valuable, quick turn-round becomes doubly important. Some of the methods of reducing terminal costs and time in port are summarized below:

(1) *Quick dispatch*.—Obtained by maximum speed in loading and discharging.

(2) *Formulation of loading plan well in advance*.—The foundation for quick dispatch. If cargo can move quickly without inter-

ference and without congestion on the pier or in the hold all the vexatious delays due either to congestion or failure of the goods to arrive on time will be saved.

(3) *Prompt delivery*.—Prompt delivery while loading is necessary to avoid delays. As the size of ships has grown much more rapidly than the wharf capacities, it is essential that delivery be taken of cargo discharged from the ship as promptly as possible.

(4) *Adequate machinery*.—Adequate machinery is of the greatest importance. Probably more attention is given to this subject than to any other phase of port development. In the case of large packages weighing more than a ton each adequate derricks either on the wharf or afloat are absolutely essential to quick dispatch. For instance, at Baltimore at the beginning of the World War it took more than an hour to load a crated Army truck from the wharf side. After the institution of a lighterage and floating derrick system with a derrick sufficiently powerful to lift easily a crated 6-ton truck, the loading time for these trucks was reduced to less than 15 minutes.

(5) *Avoiding congestion*.—Considered more important than the relative difference in machinery as various types of transfer machinery have been developed to date. There are numerous points where this congestion can be avoided, and of course must be avoided if the mission of the transport service is to be efficiently carried out.

(6) *Size of wharf deck*.—Much of the congestion at some of the ports is due to the fact that the present day large ships can discharge upon the average old pier far more cargo than it can hold. In getting along with the limited wharf space available at a given place, careful planning to secure prompt delivery of goods as wanted for stowing is necessary.

(7) *Working all hatches*.—Essential to quick dispatch. This again is dependent upon adequate machinery and adequate deck area of wharf. Unless all hatches are kept busy costly delays constantly occur.

(8) *Both sides of ship worked*.—Wherever possible, both sides of the ship should be worked at the same time. Small packages can be coming aboard from the wharf side while lighters are loading the heavy packages from the water side. If breasted off, the ship can be bunkered from both sides at the same time.

(9) *Design of wharf*.—The wharf design and its proper relation to rails, drays, warehouses, lighters, etc., is necessary to the intensive working of the ship. Ample room for lighters is just as important as ample deck room on the wharf or pier.

(10) *Warehouses in relation to wharf.*—A great deal of the congestion on the wharf can be avoided by planning the warehouses within electric trailer truck service distance. This has been accomplished at the new Army bases. By being able to hold freight in warehouses adjacent to their piers it is possible to clear the piers almost immediately, or to marshal the cargo and bring it to the ship's side in a regular and steady flow according to the cargo plan.

(11) *Skilled personnel.*—Includes skilled personnel from the pier superintendent to the longshoremen. The skill of all these persons requires practice and experience; it also requires close study.

d. Stowage.—It is essential that a ship be loaded "full and down to her marks." The vessel must carry her maximum dead-weight and her maximum capacity. In connection with loading to maximum capacity, the various types of tonnage must be kept in mind.

(1) *Methods.*—The methods used in stowing the cargo in the hold varies with the type of commodity and with the article; that is, bulk freight or package freight, etc. The manner of preparing the hold, of the use of mechanical aid, and of dunnage, size of hold gangs, etc., are affected by the type of cargo handled.

(2) *Reducing factors.*—Most of the articles carried by liner services and even by tramps on the important trade routes of the world have such high stowage factors that they fill the holds before bringing the vessels to their marks. Greater saving in shipping space therefore can be made by reducing the stowage factors or by adopting stowage measures that will permit a greater number of packages to be stowed in a given space. In some instances saving can be made by changing the design of vessels. The shortage of shipping during the World War accomplished wonders in the general reduction of stowage factors. More compact packing of a given commodity would decrease its stowage factor by 5 or more. Perhaps the most important work done along this line in the United States was that of the packing service of the Army. In order to economize space in supply ships radical changes in packing were adopted. Clothing, blankets, etc., were baled instead of cased, and this alone caused a saving of over \$49,000,000 in freight rates during 1918.

85. Tonnage data.—*a.* There should be available at every established port general information, particularly as to stowage factors, which can be used as a guide in preparing the stowage plan. However, much of the shipping data on specific military items may be obtained from the publications listed in paragraph 2, appendix I.

b. The following shipping data taken from G-4 Reference Data (Tentative), Army War College, 1937-38, are approximate and subject to continuing change, but may be used for rough calculations.

(1) *Short ton measure*.—The measure of the average short ton on military supplies is 57 cubic feet as shown in the following table:

CUBIC FEET PER SHORT TON OF VARIOUS TYPE SUPPLIES

Class	Cubic feet per short ton
Mail.....	160
Motor transport.....	143
Medical.....	124
Air Corps.....	86
Chemical Warfare.....	81
Welfare.....	78
Forage.....	71
Quartermaster (except forage).....	66
Signal Corps.....	64
Railroad equipment.....	61
Ordnance.....	50
Engineer.....	32
Average for military supplies.....	57

In view of the above figures, a load of military cargo may be taken as $1\frac{2}{3}$ of net registered tonnage, or 1 short ton of military cargo will require 1 gross registered ton of shipping.

(2) *Troop and supply shipments*.—(a) Eight gross registered tons or 5 net tons per man are required for an oversea movement when troops are accompanied by their organizational equipment and organic transport.

(b) Four gross tons or 2 net registered tons per man are required when men are accompanied by their personal baggage only.

(c) For animals, 11 gross registered tons or 7 net registered tons are required. Allowing for cargo that can be carried in addition to the animals, the net requirement is 3.4 net registered tons per animal.

(d) The weight (in pounds per man) of unit equipment and loads of vehicles for the units listed are as follows, data computed prior to organization of triangular divisions:

WATER TRANSPORTATION

Unit	Unit equip- ment	Loads of vehicles	Total per man
Infantry division-----	311. 3	422. 5	733. 8
Corps troops-----	1,289. 5	849. 3	2, 138. 8
Army corps (3 divisions)-----	571. 3	536. 0	1, 107. 3
Cavalry division-----	514.	1, 051. 1	1, 565.

From the figures may be computed a rough approximation of tonnage which must be handled by lighters, piers, etc., in a landing on hostile shores.

APPENDIX I

LIST OF REFERENCES

1. Army Regulations.

30-940	30-1150	20-1220	30-1300
30-945	30-1155	20-1230	30-1305
30-960	30-1160	30-1235	30-1310
30-1105	30-1165	30-1240	30-1315
30-1110	30-1170	30-1245	30-1320
30-1115	30-1180	30-1250	30-1325
30-1120	30-1185	30-1255	90-150
30-1125	30-1190	30-1270	90-155
30-1130	30-1195	30-1285	90-160
30-1135	30-1200	30-1290	260-10
30-1140	30-1210	30-1295	380-5
30-1145	30-1215		605-125

2. Tonnage data.

FM 9-5 (appendix II), shipping and storage data on ammunition and ordnance general supply.

FM 10-10, table of weight of subsistence stores showing unit, number of units per package, gross weight, and cubic contents of shipping packages.

FM 101-5.

Tables of Organization.

Reference data of the various arms and services.

3. Miscellaneous.

Ships Register, War Department, 1934.

Circular 1-12, Office of The Quartermaster General.

Military Laws of the United States, 1939.

FM 25-5.

FM 25-10.

APPENDIX II

GLOSSARY OF TERMS

- Ballast*.—Articles of considerable specific gravity such as iron, lead, and stone carried in hold of vessel to increase stability.
- Barnacle*.—Crustacean which attaches itself to rocks, to vessel bottoms, etc. It consists of a cone-shaped shell fastened to a fleshy foot having considerable suction power.
- Berth*.—Place where ship lies, either at anchor or in dock.
- Bilge*.—Rounding part of ship's bottom.
- Binnacle*.—Brass receptacle mounted on pedestal which contains ship's compass.
- Bitts*.—Vertical timbers or iron posts projecting above deck, securely fastened to framework of vessel for purpose of fastening cable in anchoring or mooring at dock or for towing.
- Blue peter*.—Small blue flag with a white square in the center, flown from the foremast on the sailing day of transport.
- Board*.—Term of location with reference to vessel. To board is to go upon vessel's deck. Inboard is within vessel; outboard is without; overboard is into the water.
- Booby hatch*.—Removable wooden covering with a sliding top designed to cover the smaller hatches or openings in the deck of vessel.
- Bridge of ship*.—Platform elevated at a convenient distance above the rail of a steam vessel to enable the officers to have a clear view. The chart and vessel course are connected with it. In some vessels a lighter construction is provided at a higher altitude called a flying bridge.
- Bulkhead*.—Partition in vessel. Sometimes applied to a wharf whose greater dimensions are parallel to the shore.
- Bunkering ship*.—Compartments of a ship in which fuel is carried are called bunkers; hence bunkering implies filling bunkers with fuel.
- Charter party*.—Contract by which owners of vessel let entire vessel or some principal part of it to another person to be used by him in transportation for his own account either under their charge or his.
- Commission pennant*.—Narrow whip-like pennant of red, white, and blue bunting to be flown at the foremast while transport is in service or commission.

WATER TRANSPORTATION

- Crow's nest*.—Elevated observation post on foremast for the seamen on watch, for sighting ahead, or reporting on distant landfalls.
- Derelict*.—Anything that has been abandoned at sea, as a derelict vessel.
- Dingey*.—A small boat rowed by one or two men used for light boating about vessel.
- Dock* (noun).—Slip or waterway, as between two piers, for reception of ships.
- Dockage*.—Includes all charges levied against vessel for use of berthing space whether for loading, discharging, repairs, or other reasons.
- Fid*.—A pointed piece of hard wood used to open strands of a piece of rope in splicing; an iron fid of this description is called a marlin spike.
- Fidley*.—Uptake space cut through decks and bulkheaded in from engine room or boiler room to uppermost decks.
- Freeboard*.—That portion of the hull of a vessel above the water line.
- Glory hole or glory hold*.—Usually a space forward or aft reserved for nondescript use, or for quarters for waiters and messboys, or others not part of the ship's navigating or engine room crew.
- Harbor*.—Sheltered body of water of sufficient depth to enable a ship to find shelter in it from the storms of the high seas.
- Hatch*.—An opening in the deck of a vessel; more closely an opening into main cargo part of vessel. Also a wooden shutter which covers the opening.
- Hawser*.—A large rope used for various purposes, a warping, for a spring, etc.
- Jettison*.—To throw overboard a portion of the cargo of a ship so as to provide for ship's safety and that of the rest of the cargo.
- Lazareth or lazaret*.—A space astern between decks used as a general ship's storeroom, originally in old sailing ships used as a ship's hospital room when needed.
- Lighterage*.—Includes all charges for transportation of goods by lighter in a harbor.
- List*.—Inclination of vessel to one side, as a list to port or a list to starboard.
- Log* (ship's).—Journal kept by the chief officer in which position of vessel, winds, weather, courses, distances, and everything of importance that occurs are noted down.
- Longshoreman*.—Laborer employed by a stevedore to carry out a contract to load or discharge a ship.

Manifest (ship's).—Detailed and accurate list of vessel's entire cargo.

An important operating, clearance, entry, and accounting document required by law. Serves many purposes. In time of war it is the principal cargo document examined when a merchant vessel is detained at sea with a view to identifying its cargo as to kinds of commodities, their origin, and destination.

Mine planter.—A specially constructed seagoing craft used by the Coast Artillery Corps for transportation, laying of submarine mines, and other purposes.

National ensign.—The national flag of wool bunting, flown from the stern staff of a transport while tied up at a pier or while at anchor.

Paint locker.—Chest or locker in which ship's paint is kept, but now by law all the material is required to be kept in fireproof room, which room is still termed the "paint locker."

Peak tanks.—Tanks for carriage of fresh water constructed in bow or stern of vessels, and which space on account of its sharp angular formation is not useful for cargo or crew quarters.

Pier.—Wharf structure that projects into a stream or fairway with water on both sides.

Pilotage.—Includes all charges for working a ship into and out of a harbor and through a channel or passage. It is based on some unit such as draft of vessel or tonnage.

Port.—Harbor (or haven) plus terminal facilities.

Port side.—Left side of a ship looking forward.

Quays.—Wharves parallel with the basin or harbor with water on one side.

Scuppers.—Holes cut in the waterways for water to run from decks.

Sick bay.—Ship's hospital. The old name still in use derived from the usage of British navy and merchant marine.

Sister hook.—Pair of hooks working on the same axis and forming one eye when closed and moused.

Slips.—Open water spaces or docks between adjacent piers.

Slop chest.—Stock of goods required to be kept on board by law for sale to the ship's crew. On a small boat these are kept in the so-called "slop chest" and on larger boats in the slop chest room.

Stand by.—To be prepared to act at once.

Starboard side.—Right side of a ship looking forward.

Stevedore.—Person who contracts to load or discharge a ship.

Strike.—To lower sails or colors.

WATER TRANSPORTATION

Texas.—Owes its origin to Mississippi River steamboat practice and now in naval architect's parlance means the house or quarters back of the pilothouse reserved for ship's officers.

Towage.—Includes all charges for employment of tugs or towboats for assisting vessels into and out of the harbor, for docking and undocking, and for moving vessels and lighters from pier to pier.

Union Jack.—A blue flag of wool bunting with 48 stars, similar in all respects to the union of the national flag.

Wharf.—Place for loading or unloading ships, particularly a platform of timber, stone, or other material against which vessels may lie and load or discharge their cargo.

Wharfage.—Cargo proportional to the quantity of goods passing over the wharf.

Whip.—Small light purchase consisting of a rope rove through one or two single blocks and used for speedy hoisting of articles inboard.

Wind Sail.—Canvas device used aboard Army transports, especially those carrying animals, consisting of a flaring mouth and cylindrical body. It is trimmed to face prevailing wind and serves to convey a current of air below deck of vessel.

Yawl.—Small vessel similar to a large row boat used by coast artillery troops for drill purposes and mine laying exercises, propelled by oars or motor.

APPENDIX III

BIBLIOGRAPHY

- COAST ARTILLERY CORPS JOURNAL, SEPTEMBER–OCTOBER, 1939:** History of Army Mine Planters.
- KELLY AND ALLEN:** The Shipbuilding Industry.
- MACELWEE:** Ports and Terminal Facilities.
- MACELWEE AND TAYLOR:** Wharf Management, Stevedoring and Storage.
- QUARtermaster REVIEW, SEPTEMBER–OCTOBER, 1938:** Harbor Boats.
- QUARtermaster REVIEW, MAY–JUNE, 1939:** New Army Transports.
- QUARtermaster SCHOOL:** Monograph No. 11, Notes on Transportation Service, A. E. F., in the World War, 1914–1918.
- ROBERT RIEGEL:** Merchant Vessels.
- SHANKS, DAVID C., MAJ. GEN., U. S. ARMY RETIRED:** As They Passed Through the Port.
- WILGUS:** Transporting the A. E. F. in Western Europe, 1918–1919.

INDEX

	Paragraphs	Pages
Accommodations, oversea transportation.....	54	45
Animals, transportation of.....	74-79	61
Dogs and cats.....	79	66
Port remount officer, function in.....	75	62
Animal transports.....	76	62
Routine duties on.....	78	65
Army:		
Bases.....	81	67
Transports:		
Accidents, damages, loss, or destruction (vessel or cargo).....	20	27
Administration, organization, operation, and supply.....	14-24	17
Boat or fire drill, collision, or "man overboard".....	19	27
Flags, honors, and salutes.....	23	29
In port.....	22	29
Inspecting, repairing, and painting.....	21	28
Messes.....	18	25
Reports.....	24	30
Staff:		
Civilian.....	16	21
Military.....	15	18
Army and Navy forces in joint operations.....	66	53
Army Transport Service:		
History.....	3-6	5
Shore establishment.....	7-13	9
Classification and designation.....	7	9
Officer in charge.....	8	10
Organization.....	13	16
Outposts.....	12	15
Personnel.....	10	11
Duties and responsibilities.....	11	12
Primary port.....	9	10
Baggage:		
Allowance and classification, wartime.....	70	58
Shipping overseas, normal.....	55	45
Bases, U. S. Army.....	81	67
Bibliography.....	App. III	82
Board of survey, redelivery of chartered vessels.....	48	42
Boat and fire drill, Army transports.....	19	27
Boats, coast artillery, Harbor Boat Service.....	33	34
Cargo, Army transports, damage, loss, or destruction.....	20	27
Casuals, overseas transportation.....	57	46
Cats, shipment on transports.....	79	66
Collision drill, Army transports.....	19	27

INDEX

	Paragraphs	Pages
Commercial vessels:		
Charter.....	35, 51	35, 42
Execution.....	41	38
Changing form of.....	43	38
Chartered:		
Marine disaster in	45	41
Redelivery.....	46-51	41
Board of survey.....	48	42
Dealing with owner.....	49	42
Notification letter	47	41
Time allowance.....	50	42
Chartering.....	34-45	34
Equipment, etc., removal.....	40	37
Inventories.....	38	37
Disposition.....	42	38
Owners obligation as to condition.....	36	35
Repairs.....	39	37
Survey.....	37, 42	36, 38
Contribution, general average.....	83	69
Damage, or destruction to Army transport or cargo.....	20	27
Debarkation:		
Ports of, wartime.....	69	56
Troops.....	65	50
Dogs, shipment on transports.....	79	66
Embarkation:		
Ports of, wartime.....	69	56
Troops.....	65	50
Equipment:		
Methods of shipping.....	72	60
Removal from chartered vessels.....	40	37
Explosives, shipping overseas.....	61	47
Fire drill, Army transports.....	19	27
Flags, Army transports.....	23	29
Fleet, Army transport.....	6	7
General average contribution.....	83	69
Glossary of terms.....	App. II	78
Harbor Boat Service.....	25-33	31
Classification.....	25	31
Coast artillery boats.....	33	34
Hours of duty.....	29	32
Maintenance and operation.....	26	31
Mine planters.....	32	33
Personnel.....	28	32
Purpose.....	27	31
Responsibility for troops.....	30	33
Supplies.....	31	33
Honors on Army transports.....	23	29

INDEX

	Paragraphs	Pages
Inflammables, shipping overseas	61	47
Inspecting Army transports	21	28
Instructions, sailing	63	49
Inventories of chartered vessels	38	37
Letter of notification, redelivery of chartered vessels	47	41
Lists, passenger	63	49
Loading:		
Ships	71	59
Troop property, etc	59	46
Mail, shipping overseas	60	47
"Man overboard" drill	19	27
Marine disaster, chartered vessels	45	41
Messes, Army transport	18	25
Military staff on Army transports	15	18
Merchant marine	82	67
Mine planters, Harbor Boat Service	32	33
Mobilization:		
Plan, protective, Quartermaster General	68	55
Transportation in	67	53
Ocean tonnage	48	42
Orders, sailing	62	48
Outports	12	15
Painting Army transports	21	28
Passenger lists	63	45
Passenger's routine, oversea transportation	64	49
Personnel:		
Harbor Boat Service	28	32
Shore establishment, Army Transport Service	10, 11	11, 12
Port remount officer	75	62
Ports of embarkation and debarkation	69	56
Quartermaster General protective mobilization plan	68	55
Redelivery of chartered vessels	46-51	41
References, list	App. I	77
Remount officer, port	75	62
Repairing—		
Army transports	21	28
Chartered vessels	39	37
Reports:		
Army transport	24	30
Chartered vessels, disposition	42	38
Salutes, Army transports	23	29
Shipping, oversea	52-65	43
Accommodations	54	45
Authority	53	45
Baggage	55	45
Casuals	57	46
Embarkation and debarkation of troops	65	50
Explosives and inflammables	61	47

INDEX

Shipping, oversea—Continued.	Paragraphs	Pages
Mail.....	60	47
Passenger—		
Lists.....	63	49
Routine.....	64	49
Sailing instructions and orders.....	62	48
Troop property, etc., loading.....	58	46
Shore establishment, Army Transport Service.....	7-13	9
Staff, Army transport:		
Civilian.....	16	21
Military.....	15	18
Statutory provisions.....	2	2
Steamship management, factors influencing.....	84	69
Supplies:		
Army transport.....	17	24
Harbor Boat Service.....	23	29
Survey:		
Board of, redelivery of chartered vessels.....	48	42
Of chartered vessels.....	37	36
Terms, glossary.....	App. II	78
Time allowances, redelivery of chartered vessels.....	50	42
Tonnage:		
Data on.....	85, App. I	73, 77
Ocean.....	44	38
Transport Service, U. S. Army:		
History.....	3-6	5
Shore establishment.....	7-13	9
Transportation:		
Animals.....	74-79	61
In mobilization.....	67	53
Oversea:		
Authority for.....	53	45
Casuals.....	57	46
Water.....	1	1
Transports:		
Animal, routine duties on.....	77	64
Army, organization, administration, operation, and supply.....	14-24	17
Troop—		
Movements, secrecy in.....	73	60
Property, etc., loading for oversea shipping.....	59	46
Troops, embarkation and debarkation.....	65	50
U. S. Transport Service:		
Fleet.....	6	7
History.....	3-6	5
Organization.....	3	5
Performance.....	5	6
Vessels:		
Commercial, charter of.....	34-45	34
Ocean tonnage of.....	44	38
Water transportation.....	1	1

BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,
Chief of Staff.

OFFICIAL:

E. S. ADAMS,
Major General,
The Adjutant General.

DISTRIBUTION:

B (1); R (2).

